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ABSTRACT

Topics of importance to rural America in three general areas--rural community and individual information needs, available answers to these needs, and policies and strategies to meet these needs--were addressed in a joint congressional hearing held at the Fourth General Assembly of the World Future Society in July 1982. This transcript presents oral statements by 11 witnesses representing information providers, intermediaries (librarians and extension workers), and rural user groups; written testimony submitted for the official record; and five appendices. Testifying on the information needs of rural America and the services being developed to meet them, the witnesses emphasized that America's rural economy and well-being depend on an information infrastructure that is now technically possible and economically feasible. Written testimony includes statements by Senator Larry Pressler, Patricia E. Klinck (Vermont State Librarian), and Daniel H. Carter (Texas Instruments, Inc.); a position paper, "Teleleaxning for Rural America," by William R. Oates (University of Alabama); and letters from Senator Arlen Specter and DeAnn Hilmoe (St. Mary's Hospital, Pierre, South Dakota). Appendices contain a paper, "Government Publishing: Problems and Prospects," by Senator Charles Mathias; a report, "Reference Services in Rural Public Libraries in Communities of 25,000 or Fewer People," by Bernard Vavrek; comments of members of the White House Conference on Library and Information Services Taskforce; and the text of Public Law 91-345 and Public Law 97-98. (THC)

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United States
Department of
Agriculture

National Commission on
Libraries and
Information Science

ED247958

Joint Congressional Hearing on the Changing Information Needs of Rural America: The Role of Libraries and Information Technology

July 21, 1982

U.S. DEPARTMENT OF EDUCATION
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IR 050 411

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

Dear Friends:

We are witnessing a myriad of new information technologies being applied in all facets of our daily existence. One sector of our society that can benefit most from this virtual explosion of technology is rural America.

For many years rural Americans have been somewhat isolated because of distance and dispersion. Until after World War II, communication between rural America and urban centers was limited. By and large the educational and cultural opportunities available to urban citizens could be obtained only by visits or migration to the universities and metropolitan centers of the nation.

All of this has now changed. Recent studies show that the rural citizens need many of the same services as urban citizens. Moreover, in some regions they are doing something to obtain them. Numerous communities throughout the United States are combining public sector and private sector facilities such as telecommunications systems, school systems and library networks into active consortiums, frequently with State and foundation assistance. They have pooled their resources to improve local libraries and health care facilities, help local governments and businesses, and increase the resources of local educators by providing greater access to available information resources.

The testimony of witnesses to the Joint Congressional Hearing on "Changing Information Needs of Rural America - The Role of Libraries and Information Technologies" emphasizes our responsibility to be more responsive to rural citizens' business, cultural, educational, and health maintenance information needs. Small town governments must acquire the contemporary communications tools to satisfy these needs. Community information specialists, capable of identifying and using the many available data bases, must be trained. The establishment of local information centers under local control must become a priority of State and local governments.

I believe the desire and capability to do these things exists in our rural communities. For example, I recently had the pleasure of meeting 13-year-old Jason Hardman from Elsinore, Utah. Jason started a library in his home town (population 680) and was en route to the White House to receive a Certificate of Achievement and Appreciation for "calling national attention to the library and information needs of rural America."

During the ceremony, President Reagan acknowledged and praised this young leader. Jason's testimony is in the hearing record and tells a fascinating story. Congressman Brown, after hearing Jason's testimony said, "I have listened to a lot of witnesses at

hearings, and I can tell you honestly that there are very few who have given a more coherent and interesting statement than you have."

The Department of Agriculture is pleased to be the co-publisher of the proceedings of this hearing with the National Commission on Libraries and Information Science, which coordinated arrangements for the hearing.

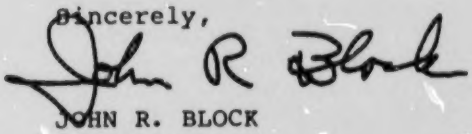
Special thanks should go to Senator Mark Andrews of North Dakota and Representative George E. Brown of California for co-chairing the hearing.

This hearing is one of a series of congressionally sponsored hearings and workshops on rural information needs and the technologies that can be responsive to these needs. The Department of Agriculture will continue to cooperate with the commission in furthering the common goal of providing good information to our agricultural and rural communities.

USDA's Extension Service recently published "Challenge and Change ... A Blueprint for the Future -- Extension Service, USDA" and the University of Wisconsin published, "Extension in the 1980's," a report on the future of Cooperative Extension. Both of these documents, while broader in scope than the joint congressional hearing, support and reinforce the testimony of the witnesses at this hearing. It is my sincere hope that the commission's high level of interest in strong rural information services will be maintained.

In turn the commission can continue to count on the full cooperation of the Department of Agriculture.

Sincerely,



JOHN R. BLOCK
Secretary

National Commission
on Libraries and Information Science

GENERAL SERVICES ADMINISTRATION BUILDING
7TH & D STREETS, S.W., SUITE 3122 • WASHINGTON, D.C. 20024
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American values are changing, and there is widespread belief that science and technology, public institutions, and economic processes have to be adapted to human scale. Citizens want as many decisions made at the local level as possible, especially those regarding their well-being. This is particularly true of rural citizens. Their concern is not so much with States' rights as with local rights. Although many small communities' public and private problems are the same as those prevalent in large cities, rural communities are unable to handle their problems without outside assistance because the necessary informational resources and expertise often do not exist within the community. Rural communities still have to depend to a large degree on a variety of vertical links to major universities, large business institutions, State governments, and in some cases the Federal Government, for expert assistance in solving their problems.

In order to develop healthy, essentially self-contained rural communities, it is becoming increasingly necessary to develop some kind of local rural information center. Every demographic study during the past decade indicates clearly that the movement of people and businesses from metropolitan to nonmetropolitan areas will continue. These new residents come with great expectations and demands for information-related services, and the need to strengthen these services in rural America becomes then a major social and economic requirement. Since contemporary economic development in small communities is extremely difficult without ready access to vital information and data services, it seems evident that all available resources and technology must be made to work in harmony to achieve the long-range goal of making useful information easily accessible to the rural citizen. A decade ago this goal would not have been realistic because the dispersion of rural communities and people was a barrier to document and information delivery, which no amount of Federal or State support could overcome. Similarly, the private sector had no incentive to reach out to this virtually untapped market. The situation has now changed because it has become apparent to governments and businesses that telecommunications and the computer have the potential, if properly used, to eliminate past barriers to the provision of information services to rural citizens.

One of the important responsibilities assigned by Congress to the Commission is the coordination of Federal, State, and local resources in order to develop overall plans for meeting national library and information service needs. We were also instructed to pay special attention to the "informational needs of rural areas." The Commission's National Rural Information Services Development Program (NRISDP) was established to develop the rural part of this overall plan.

Public hearings are one of the methods used by the Commission to identify the pressing needs of various constituencies. One of the more difficult tasks in such a public hearing is the selection of witnesses.

Time constraints dictate that each witness must be willing and able to address the multifaceted aspects of the problem at hand, rather than just the particular concerns of individual institutions. The witnesses who testified at the joint congressional hearing on the "Information Needs of Rural America - The Roles of Libraries and Information Technology" did an excellent job in this respect, and the Commission thanks them for their time and effort.

We are grateful to Senator Mark Andrews of North Dakota and Representative George E. Brown, Jr., of California for sponsoring and chairing the hearing, and we thank them for their efforts. Special thanks also to Commissioners Charles Benton and Margaret Warden for assuming the chair when Senator Andrews and Representative Brown were called away for important votes.

Our thanks and appreciation also go to Raymond D. Lett, executive assistant to the Secretary of Agriculture, who obtained Secretary John Block's agreement to copublish the hearing. The publication of the hearing, under the imprints of USDA and NCLIS, is a milestone in the Commission's history, and a good example of cooperation between Federal agencies.

Whenever a policy decision is made, someone has to carry it out. In this case that person is Ernest Matthias, confidential assistant to the Assistant Secretary for Administration, USDA, to whom we are deeply grateful. And, finally, we want to thank Edgar A. Poe, Jr., acting chief, Publications Department, and Edna Carmichael, acting chief, Editorial Branch, both of the Office of Governmental and Public Affairs, USDA, for their close cooperation with our staff.

I hope that the joint efforts of USDA and NCLIS to improve rural information services will continue. Secretary Block can be assured that the Commission will continue to carry out its role as catalyst in this endeavor.

Elinor M. Hashim

Elinor M. Hashim
Chairman, National Commission on
Libraries and Information Science

JOINT CONGRESSIONAL HEARING ON THE CHANGING INFORMATION NEEDS OF RURAL AMERICA—THE ROLE OF LIBRARIES AND INFORMATION TECHNOLOGY

INTRODUCTION

In the summer of 1981, Dr. Toni Carbo Bearman, executive director of the National Commission on Libraries and Information Science (NCLIS) wrote to the program coordinator of the World Future Society to indicate that the commission was interested in "sponsoring and coordinating a session at your Fourth General Assembly on the general topic of rural public libraries as community information and learning centers." The assembly was scheduled to be held in Washington, D.C. on July 18-22, 1982. The society's program committee welcomed and accepted Dr. Bearman's proposal.

An NCLIS Committee on the Future Rural Library and Information Center was formed, chaired by Gerald J. Sophar, NCLIS's administrator for federal/local community information programs. The members of the committee were Ken Hunter, General Accounting Office (assembly program chairman); Dr. Audrey Clayton, vice president, Forecasting International; Blake Cornish, World Future Society; Dr. Douglas Berninger, president RFP, Inc.; Mary Alice Hedge Reszetar, associate director of NCLIS; Dr. Charles Goldstein, chief of Computer Technology Branch, Lister Hill Center, National Library of Medicine; and Samuel Beatty, executive director of the American Society for information Science (ASIS). The group had little trouble identifying three general catagories for a variety of topics that are of vital importance to rural America:

- Rural community and individual information needs
- Available answers to these needs
- Policies and strategies to meet these needs

Historically, the World Future Society assemblies attract large audiences, including the general public, because of the prominence of their speakers. More than 5,000 participants were expected to attend to listen to talks on "Communications and the Future" at the Fourth General Assembly. A number of themes and many topics, too extensive for all to be listed here, were included in the general program. Some of the themes were: The Information Society, Government and Public Policy, Law, Networking, and Third World Development. Consequently, the committee knew that many other programs and sessions would be competing for the attention of those attending the conference and for press coverage.

After considerable groping and searching by the committee for an innovative idea that would attract the largest audience for the commission-sponsored session, Samuel Beatty suggested, "Why not hold a congressional hearing on the changing information needs of rural America? If necessary the commission itself has the authority to hold hearings." The idea of a congressional hearing was adopted.

Robert L. Chartrand, senior specialist in information policy and technology, and Dr. A. Barry Carr, senior analyst in agricultural policy, Congressional Research Service, were immediately contacted and asked to join us in an effort to obtain commitments to cochair the hearing from Senator Mark Andrews (R) of North Dakota, chairman of the Senate Subcommittee on Rural Development, Oversight, and Investigations; and Representative George E. Brown, Jr. (D) of California, chairman of the House Subcommittee on Department Operations, Research, and Foreign Agriculture. Their assistance contributed greatly to the success of the hearing. Ed W. Doherty, then executive assistant to Senator Andrews, and Skip Stiles, legislative assistant to Representative Brown, were very helpful in the coordination process, especially since—as it turned out—the hearing was scheduled during major budget votes.

More than 350 individuals, many from the general public, attended the joint congressional hearing. Witnesses representing information providers, intermediaries (librarians and Extension workers) and rural user groups testified on the information needs of rural America and the services being developed to meet them. The witnesses emphasized that America's rural economy and well-being depend on an information infrastructure that is now technically possible and economically feasible. The hearing lasted 2½ hours. When Senator Andrews and Representative Brown were called away for an important vote, NCLIS Chairman Charles Benton and Commissioner Margaret Warden replaced them in the chair to hear the remaining witnesses.

Outside the hearing room, 1,500 people also visited an NCLIS-sponsored exhibit of a model rural learning/information center that had been constructed by the Library Resources Corporation of America (LRCA), a subsidiary of the Maxima Corporation of Bethesda, Maryland. The exhibit, designed by Washington's own Arena Stage Company, portrayed a small rural library that housed an array of contemporary electronic information searching and learning devices. Librarians and Extension workers from Colorado, Montana, Utah, and Wyoming were there to demonstrate the new equipment. These four states are participants in the Intermountain Community Learning/Information Center project (ICLIS). ICLIS representatives were able to come to Washington with the support of the Farm Foundation.

While the joint congressional hearing on the information needs of rural America is an important milestone in itself, it has further significance as one of many congressional hearings and workshops, professional association sessions, and land-grant university symposia on rural information needs and systems that have been held across the country in the past year and a half and that are being planned for the future.

Regardless of all of the thinking, planning, and coordination that went into the hearing, its substance is in the testimony. The witnesses are the real contributors to this publication. They are all deeply concerned about the many needs of America's rural citizens and communities and the role of information in answering these needs. Their testimony is well-prepared, lucid, and informative.

Editing the transcript of a hearing is a difficult task. The coherence and readability of the final publication depends on the editor. Dorothy Gray, NCLIS research associate, is that editor and she is entitled to the thanks of all the participants.

Gerald J. Sophar
NCLIS

WITNESSES WHO GAVE ORAL TESTIMONY AT THE JOINT CONGRESSIONAL HEARING

MRS. MARGARET WARDEN
Great Falls, Montana

Mrs. Warden is a former state senator from Montana. She has been a lifelong supporter of better library and information programs within her state and in rural America as a whole. She is currently a member of the National Commission on Libraries and Information Science.

DR. GLENN WILDE
Assistant Dean, Extension
College of Humanities, Arts and Social Sciences
Utah State University - HASS
Logan, Utah 84322

Dr. Wilde started the Utah Rural Arts Consortium, which tours major productions to rural communities. He currently leads the Intermountain Community Learning and Information Services Project (ICLIS) in Colorado, Montana, Utah, and Wyoming, a project designed to market rural libraries as key institutions in local communities.

DR. BETSY PETERS (accompanying GLENN WILDE)
Director of Special Projects
School of Extended Studies
University of Wyoming
Laramie, Wyoming 82701

Dr. Peters' responsibilities include continuing education programs. She has been working with the Wyoming State Library on the development of learning/information centers in connection with the ICLIS program.

DR. BERNARD VAVREK
College of Library Science
Clarion University of Pennsylvania
Clarion, Pennsylvania 16214

Dr. Vavrek is a professor in the School of Library Science, Clarion State College, Pennsylvania and coordinator of the Center for the Study of Rural Librarianship. The center provides research data on problems facing rural libraries and serves as a consultative and training facility for rural librarians. During the past 2 years, the center has been working on a national survey of public libraries in rural areas. Future national surveys (including a consumer-oriented study) are planned under a grant from the H.W. Wilson Foundation.

MR. DAVID DE TURK
Director of Research
National Rural Primary Care Association
Waterville, Maine 04901

The National Rural Primary Care Association is a 5-year-old organization concerned with rural health information delivery systems in small communities nationwide. It assists professionals in the health care field with their continuing education needs, and it fosters information networks which help overcome the problems of isolation in widely dispersed rural communities. Mr. de Turk's background is in communications and the health field.

MS. LAUREL KUBIN
Colorado State University Extension
County Fairgrounds
P.O. Box 270
Meeker, Colorado

Ms. Kubin is an Extension agent for Colorado State University Extension, Rio Blanco County, Meeker, Colorado. She participated in community development activities on the western slope of Colorado, and initiated the ICLIS project and the multi-use facility in Meeker, Colorado.

DR. WESLEY MAUGHAN
(accompanying LAUREL KUBIN)
Director of Community Development Programs
University Extension
Utah State University
Logan, Utah 84322

As director of community development for Utah State University, Dr. Maughan supervises a project entitled Utah Community Progress. This statewide program combines the resources of state and local governments with those of the university Extension to promote community planning, growth, and development.

JASON HARDMAN (Wayne and Linda Hardman - parents)
Route 1, Box 166
Monroe, Utah 84754

Twelve-year-old Jason runs the library in his hometown of Elsinore, Utah (pop. 680). He is also the library's founder, having convinced the city council to provide a location for a local library. Under Jason's care, the Elsinore Library has grown from a handful of donated books to a collection of around 13,000.

MS. LAURA CHODOS
Box 320, R.D. -2
Rexford, New York 12148

Mrs. Chodos was elected in a joint session of the state legislature to serve as the New York Board of Regents member representing a region of 11 rural counties. She is regional representative for the White House Conference on Library and Information Services Taskforce (WHCLIST). She belongs to rural affairs associations such as Rural American Women (RAW) and several international women's networks concerned with health, nutrition, education, and peace. Her background is in economics, sociology, and educational research.

MS. BARBARA SHELDON NAMIE
Coordinator, South Central Minnesota Inter Library Exchange (SMILE)
Box 3031
Makato, Minnesota 56001

Ms. Namie is the coordinator of a system which serves school specialists and academic libraries in a nine-country rural area in south central Minnesota. Under a grant, SMILE sponsored a program to train library personnel on the various categories of information needs of farmers. The network is also involved with delivery systems and experimentation with telecommunications.

DR. MYRON JOHNSRUD
State Director, Extension Service
North Dakota State University
Fargo, North Dakota 58105

Dr. Johnsrud is the state director of the USDA Cooperative Extension Service for North Dakota. He is vice chairman and chairman-elect of the Prairie Public Broadcasting Corporation, which also serves contiguous areas of Canada, Montana, Minnesota, and South Dakota.

CONTENTS

Proceedings: Oral Testimony

Representative George E. Brown, Jr.

Charles Benton, *Chairman*
National Commission on Libraries and Information Science

Senator Mark Andrews

Margaret S. Warden, Former Montana State Senator

Myron D. Johnsrud, *State Director*
North Dakota Cooperative Extension Service

Jason Hardman of Elsinore, Utah

Glenn Wilde, *Assistant Dean, Extension*
College of Humanities, Arts and Social Sciences,
Utah State University

Bernard Vavrek, *Professor,*
College of Library Science,
Clarion University of Pennsylvania

David de Turk, *Director of Research*
National Rural Primary Care Association,
Waterville, Maine

Laurel Kubin, *Extension Agent*
Colorado State University Extension

Wesley Maughan, *Director*
Community Development Programs,
University Extension, Utah State
University

Laura Chodos,
Member, New York State Board of Regents, and Regional Representative for the White House Conference on Library and Information Services Taskforce (WHCLIST)

Barbara Sheldon Namie, *Coordinator,*
South Central Minnesota
InterLibrary Exchange

Written Testimony Submitted for the Official Hearing Record

Senator Larry Pressler

Patricia E. Klinck, *Vermont State Librarian*

Daniel H. Carter, Texas Instruments, Inc.

William R. Oates, University of Alabama

Senator Arlen Specter

DeAnn Hilmoe, St. Mary's Hospital

Appendix 1 - Government Publishing: Problems and Prospects. Senator Charles McC. Mathias, Jr.
Appendix 2 - Reference Services in Rural Public Libraries in Communities of 25,000 of Fewer People. Bernard Vavrek
Appendix 3 - Comments of WHCLIST Members on Library Activities in their States and Trust Territories
Appendix 4 - Public Law 91-345
Appendix 5 - Public Law 97-98

Issued August 1984

Congressman George E. Brown, Jr., of California (center) discusses Committee hearing procedures with Gerald J. Sophar, (left) Administrator, Federal/Local Community Information Programs, National Commission on Libraries and Information Science. Senator Mark Andrews of North Dakota is on right.

PROCEEDINGS: Oral Testimony

I am Congressman George Brown.

I would like to commend the National Commission on Libraries and Information Science and the World Future Society for sponsoring this morning's hearings. Having just held a workshop on the uses of information systems in agriculture, I look forward to today's discussion.

As a member of the House Agriculture Committee and the House Rural Caucus, I am well aware of the problems which rural America faces in obtaining the information every individual or community requires in modern society. These needs can be as simple as a reference citation from a library or as complex as a world grain forecasting model's prediction for use in making next year's cropping decisions.

Yet in rural areas, distances make information services relatively inaccessible, or at least they have up to now. Low population density means that rural areas are "skipped over" for many services, especially commercial services. These factors can place rural areas at a disadvantage when compared to urban areas.

However, I also serve on the House Science and Technology Committee, where I have been exposed for a number of years to the advances being made in information and communications technologies. These technologies, properly applied, can begin to answer the needs of rural America.

These technologies are distance-insensitive. By that, I mean that it is just as easy to access a data base in the next room as it is to access one in the next state or even the next country. This also overcomes the rural population density problem, since it is now possible to aggregate users in Utah, Montana, Wyoming, Colorado, and North Dakota into one group. We can now begin to speak of communities which share common needs and goals being linked by these technologies into a metropolis covering thousands of square miles.

But to be effectively used, these technologies require a great deal of planning and organization. There needs to be a realistic appraisal of what these technologies can do and what they cannot do. Common protocols need to be developed in order to communicate in the same "language." And there needs to be a rationality to the organization of these information systems.

While all of these points will be touched upon today, the last point is one which we will be hearing about in some detail. In the design of any information system, the designation of points of entry into the system and the linkages of one information system with others is critical. For centuries, libraries have served as information centers in society, and it is appropriate that they should have a major role to play in the evolution of information sciences.

The National Commission on Libraries and Information Science has been exploring this area for some time and has identified a major role for libraries to play in the development of information systems in coming years.

One system in particular which has been at the forefront of the evolution of information science in rural areas is the Intermountain Community Learning/Information Services project (ICLIS), which is well represented today. We look forward to hearing from these representatives and from the other groups and individuals who have been working hard to serve the information needs of rural America and to create a "rural metropolis" through the use of information science and technology.

To the extent that we succeed in making breakthroughs in this country—in recognizing and meeting these needs—we will be pioneering for the vast majority of the people of the planet, because most of them are rural people living in small villages and communities. And if you want to look at this from a very hard and pragmatic point of view, we will be pioneering in the new markets of the next century if we succeed in solving some of the problems we will be discussing here today.

Since Senator Andrews hasn't arrived, I am going to call on Charles Benton, the chairman of the National Commission on Libraries and Information Science, to make a few opening remarks at this point.

Statement of Charles Benton, Chairman, National Commission On Libraries And Information Science

MR. BENTON: Thank you very much, Congressman Brown. All of us in the room and elsewhere who are concerned about these issues are deeply indebted to you for your leadership and commitment in the areas you have just enumerated.

Public Law 91-345, the law that established the National Commission on Libraries and Information Science in 1970, states:

"The Congress hereby affirms that library and information services adequate to meet the needs of the *people* of the United States are essential to acheive national goals. . . ."

For 11 years, the commission has been carrying out its responsibilities with enthusiasm and energy, and yet it is a constant challenge for any national policymaking agency to ascertain the true needs of the people. Every association, organization, and community group tries to speak for the people it represents, and therein lies its strength. However, from time to time, it is absolutely necessary to take the pulse of the people directly.

The commission enjoyed a unique opportunity to do this on a national scale when it coordinated the 1979 White House Conference on Library and Information Services. This major undertaking represented an investment of the time of more than 100,000 U.S. citizens. Today, with the generous assistance of Senator Andrews and yourself, several of your colleagues, and our expert witnesses, we are hearing firsthand the voices of the people of rural America describe their needs for better access to the information they need.

The law that established the commission also charges us with monitoring the information needs of rural areas. In line with this important responsibility, we have chosen the Fourth General Assembly of the World Future Society to highlight a program that the commission has been developing for the past year and a half under the leadership of Gerald Sophar, whose services have been most generously loaned to us by the U.S. Department of Agriculture's National Agricultural Library. This program emphasizes the need for better and more equitable dissemination of needed information to rural America. We selected this conference as a forum partly because we believe in the present and future potential of modern technologies to revolutionize information services to rural areas, as you have just expressed in your opening statement.

The member of our commision with the most experience with rural issues, Margaret Warden, a former state senator from Montana, will tell you in greater detail about the commision's perspective on library and information services to these changing regions.

As our Congressional colleagues have stated, today's hearing will concentrate exclusively on the problems and information needs of rural citizens. We particularly hope that our efforts, supporting those of Congressional leaders, will lead to carefully thought-out information policies which specifically address the needs of rural communities and citizens. In addressing a national problem of these dimensions, it is crucial that we make the problems clearly visible and that potential solutions be suggested. I am confident that we will make progress toward accomplishing this today.

I want to thank the Intermountain Community Learning/Information Services group, headed by Dr. Glenn Wilde of Utah State University, and the Library Resources Corporation of America, a subsidiary of the Maxima Corporation, whose President is Joshua I. Smith, for their fine assistance in putting together the demonstration exhibit which you passed on the way into this hearing. I hope the members of the audience will spend time viewing the exhibit and experiencing the possibilities of this model rural community learning/information center of the future.

It gives me great pleasure to introduce Margaret Warden, a most valued colleague and friend at the National Commission, who has been a member of the National Commission on Libraries and Information Science (NCLIS) since 1979. She is our most knowledgeable and experienced commissioner in rural issues and leads our Legislative and Public Affairs Committee with untiring energy.

Margaret's many contributions to libraries include heading a public library board and the state library commission in Montana, helping Friends of the Library programs, contributing to various library publications, and serving as a most active member of the American Library Association since 1957.

Margaret has been a life-long supporter of better library information programs in her own state, but the benefits of her work have been extended to libraries in rural America as a whole.

CONGRESSMAN BROWN: Before you begin, Mrs. Warden, may I just extend my own welcome to you and make note of the fact that you are a former state senator in Montana. I know the effort and work involved in that kind of a job, and I am very pleased that someone who has devoted as much time and interest to the problems of libraries and rural information systems as you have is obviously also deeply concerned about the political situation in your state.

I think we are all going to have to develop that kind of concern to make the progress we want to make. So I am very grateful to you for being here, and I look forward to your statement.

Margaret, because Senator Andrews has just come in, this would be a good time to let him say a word or two also.

Welcome, Senator. I have been keeping a place warm for you.

Senator, I indicated you would probably want to make a brief opening statement when you got here, so I will introduce you at this time.

I had the pleasure of serving with Senator Andrews for many years in the House, where I gained a great deal of respect for him and for his leadership in many areas. He, of course, is an eminent spokesman for the needs of rural America and matters of agricultural policy. Unfortunately, we lost him in the House to the Senate, where he is continuing his leadership role. We are pleased to see you here this morning, Senator.

SENATOR ANDREWS: Thank you George, for those kind remarks. It is indeed good to be here. Of course, I join my colleague, Congressman Brown, in welcoming each of you to this hearing that I know will be enlightening and informative for each of us.

All the best information in the world is of no value unless it is utilized by people, utilized in a way that can improve their own lives, their own professions, businesses, and the com-

munity around them. Dissemination of this information is of extreme importance, and it has been through the years. With today's modern technologies, including computers, lasers, and communication satellites, we are coming into the realm of possibility of getting information from all parts of the world on almost a split-second basis.

In my home State of North Dakota, we have the beginnings of such a system for our rural people. We call it AGNET. Basically, it provides quick access to valuable and necessary information for our farmers and our ranchers. We also use this type of communications network to extend to our smaller rural schools the information and the wealth of teaching knowledge that can give them many of the advantages usually found only in the much larger metropolitan schools.

Those who are going to be presenting information today are well qualified to enlighten us on what the future holds. I know that they will have a great story to tell. Their diversity of backgrounds will help us prepare for these revolutionary changes in the years to come.

Unfortunately, George, the Senate has a little problem this morning. We are discussing the tax bill. And it so happens that within a few minutes we are going to vote on one of the key substitutions, and I will have to excuse myself. But I am looking forward to seeing the transcript of the testimony that is here. So if I might, George, I would like to conclude my own brief remarks by complimenting you for the leadership you have shown in helping organize this hearing and for your chairmanship of the subcommittee you direct so well.

It is a pleasure to cooperate, since moving ahead in this area is so important to the future of our country—indeed, to the future of mankind. Information really is the key to success for tomorrow. However, that information isn't worth anything unless it is in the hands of people who need it and can use it wisely.

This is a great conference, and I commend all of you who attend to offer your ideas and suggestions so that the rest of us might benefit from them. Thanks for letting me join you briefly this morning.

Statement of Margaret Warden, Great Falls, Montana

MRS. WARDEN: I am a lifelong resident of Montana where the population density is 4.72 persons per square mile. Incidentally, in area it is the fourth largest State, with a total population of 780,000. I grew up in the State, and I know firsthand the joys of rural life as well as its deprivations.

In the fourth largest State, there are no cities with populations more than 84,000. I am testifying today as an individual who is actively concerned with the changing information needs of rural America and who has been for the past 25 years. I have traveled the entire state, I have been in every county. I have done what I could to improve libraries in Montana, with some success.

In 1979 I was appointed to the National Commission on Libraries and Information Science. This very rewarding responsibility has provided me with an opportunity to focus national public attention on the continuing educational and informational needs of the nation's rural communities and on the services required to respond to these needs.

In November of 1979, the commission conducted the first White House Conference on Library and Information Services. White House conferences are one way in which the citizens can express their concerns to Congress and to the President. Planning and getting ready for a White House conference is difficult, and managing one is strenuous and wearing. But the last step—implementing resolutions—is the hardest part of the process. After the euphoria of the conference has died away, enough momentum must be maintained to bring about the changes and improvements suggested by the delegates. The coalitions that were formed prior to and during the conference must be strengthened to give further impetus to the delegates' resolutions.

Today's Joint Congressional Hearing on the Changing Information Needs of Rural America is a milestone in our post-White House conference history. The commission is pleased to be able to concentrate a significant amount of effort on the specific problems and information needs of rural Americans, as our authorizing law requires.

On behalf of the commission, my fellow rural citizens, and myself, I want to state my deepest appreciation and thanks to Senator Andrews and Representative Brown for cochairing this hearing.

The first all-purpose, all-electronic digital computer was introduced in 1946. Since then, technology has helped us to make tremendous strides in organizing, storing, retrieving, and disseminating information. However, most of the benefits from this technology have *not* yet been made directly available to rural communities and rural citizens.

Of course, there is a reason for this situation, one which other witnesses may mention. The reason is a very simple one which can best be understood in a marketing context: many rural communities have been too isolated and too small to support anything more than minimal library services and facilities. In other words, the market was too dispersed and too thin to allow for effective information to rural Americans.

Many of the small communities in Montana maintain libraries that belong to all the people and represent the public interest. For information requests, these institutions are dependent on the six Montana library federation headquarters where their requests are sent via a microcomputer network to the major

state universities and other public libraries in the state. The Montana State Library uses the Washington Library Network and the powerful capabilities of computer data bases to fill most of the requests. The small communities simply have not had the financial, material, technological, and personnel resources to make libraries the important and viable community institutions they should be.

Because Congress in its wisdom passed the Library Services and Construction Act, the libraries have come "a fur piece" in the last 25 years. They needed to grow, to branch out to Montana Library Federation headquarters, improve book and periodical selection, become accustomed to getting more information that was being made available, and have better trained personnel serve the small communities. Bookmobiles and books by mail were available, but not the physical means for the new technology, except through contact with the State Library date bases. However, I believe we are now at a point where we can seriously consider the prospect of rural libraries becoming even more important to their communities by expanding their roles to become key, essential institutions in local rural communities and regions. I think this is an idea whose time has come.

What we are now proposing is that these local libraries be changed into vital community library learning and information centers. It is computer and satellite telecommunications technology that makes such a proposal realistic. Today, communications technology can bring needed information right into the home or office. Public and private satellite services are ready to train, retrain, or entertain the rural citizen. The farmer's long-time friend, the State Cooperative Extension Service, is developing many new services for the farmer and rural citizen.

Both the public sector and the private sector are offering a significant number of information services that go directly to the home. These services roughly divide into two categories. One contains problem-solving and marketing services such as AGNET, which is an agricultural management, information delivery and communications service originally funded by the Old West Regional Commission. The original demonstration project in Nebraska, North Dakota, South Dakota, Montana, and Wyoming has grown into a state-funded network now used in more than 40 other states for agriculturally related management and business information. The second category of new information service is typified by enrichment or entertainment services. In light of these new developments in home information services, a key question is, Are rural library learning/information centers needed at all? This is an issue worth exploring.

Since 1914, with the passage of the Smith-Lever Act, many of the information needs of rural citizens have been satisfied by the Cooperative Extension Service. Its 17,000 professional and 10,000 paraprofessional workers have been busy transferring the results of research in agriculture to the rural citizens. Much of what we call innovation on the farm has come along a well-traveled road that leads from land-grant universities and other research centers to the county agent, and eventually to farmers and other rural citizens. This highly successful, unique system is now under severe strain because of several unanticipated problems.

One of these, a true marketing problem, has surfaced during the past decade. On a regional basis, rural communities previously have tended to be homogenous in their cultural, religious, political, and work activities. But this isn't true any more.

Between 1972 and 1978, nonmetropolitan counties added 6.2 million jobs to the U.S. economy. Sixty-two percent of these jobs are in the service sector and not in agriculture. Thus, rural areas are becoming more attractive to industry, large and small. No longer can we equate "rural" with "agriculture." No longer can or does the Extension Service concentrate on the farmer as its sole, or even prime, constituent. The new Extension Service's potential constituents often migrate to rural areas because corporations are finding these communities most suitable for their businesses. By and large, the highly technical new rural residents want and need different information services than have traditionally been supplied to the rural community.

Industries, especially those related to high technology, are steadily moving into the rural areas of the country. Consequently, new small enterprises will start, grow and flourish; and, I hope, not go bankrupt. In fact, large-scale migration of industry to nonurban areas is already happening in the Sun Belt. This movement is being assisted and encouraged by federal and state governments in many ways. Legislative initiatives to encourage new enterprises in rural areas are also being explored.

All of this underscores the marketing problem facing the Cooperative Extension Service today. Its constituency has become too broad and diversified. The Extension Service is no longer a repository of the full range of information that will be needed by the emerging rural community of tomorrow; instead, it concentrates almost exclusively on information relating to "food and fiber," which is the specific area of responsibility of the U.S. Department of Agriculture. Naturally, this excludes health information, most economic information, and other components of the broad range of knowledge needed by today's community decisionmakers, professionals, businessmen, and other rural citizens.

With the changing face of rural America, there needs to be a joining of forces for the benefit of all. The rural library, which has established credibility and has long been an important information source for the community, also needs help.

Now I would like to return to the key question I posed earlier. With the abundance of new, computerized information systems and services, are rural libraries or their logical successors, community library learning and information centers, needed at all? And my answer is an emphatic "yes."

A centralized facility is needed because it is not economically feasible for every rural home and office to have direct access to all of the potentially necessary data bases and information services, any more than each rural family can afford to purchase all the books to which they have centralized access in a public library. A community facility would provide greater availability of a wider range of resources for a larger number of users, and, consequently, would provide much broader accessibility to information in the community. The alternative would be to put the range of information resources largely in the hands of an elite group who could afford to subscribe to them on an individual basis.

Rarely does the information needed by members of today's rural community exist within a single data base or information system. Large corporations, institutions, and governments have staffs of experts to access scattered information resources rapidly and effectively to meet the needs at hand. However, for the rural farmer, small businessman, local government official, or the average citizen, this task is not simple. Not only are the information resources scattered but the terminologies and techniques of access are varied and complex, requiring in most cases specialized training and considerable practice.

The community library learning/information center concept also has the potential to help furnish much needed continuing education for rural citizens in all fields. This will benefit rural professionals and paraprofessionals in areas ranging from health care to firefighting, and it will also help Extension agents keep abreast of new developments and resources in fields related to their work.

Here is an example of that kind of potential in my home state. These figures will probably sound rather strange to many of those who live in the East, but Gallatin County has the largest dairy production herd of any county in Montana with eighty producers and 5,000 cows. After a test project to improve recordkeeping, it was found that a more accurate view of productivity and the health of each cow could be provided. This allowed better decisions to be made on culling and breeding practices. Two testers are working in the county, and the reports are online from the Dairy Herd Improvement Association via a computer in Utah. The cost per cow is about $1.20 per month. The computerized system, although complex, was easy to learn. This sort of computerized recordkeeping can be used for other needs of farmers, ranchers, and small businessmen.

I just made a trip to Bozeman to visit the land-grant State University of Montana. All of the agricultural and economics students are taking required courses on systems like AGNET. Unfortunately, just when this service is getting off the ground, there are financial problems. And continuing funding is always a problem because that is strictly up to the state at present. In a similar manner, the community library learning/information centers could keep local community leaders and small businessmen up-to-date on new public and private sector data bases and other information resources relevant to their work.

The learning/information center must become a vital part of the local community structure. I stated earlier that it is new computer and telecommunications technologies which make this entire concept workable. Economic support for these new technologies must come through successful competition for the revenues at the local government level, through local business incentives, and through a share of available federal monies.

The local community library has been an important information source for nearly a century. However, we need to help local leaders and citizens see the potential of the library as the focal point for all the information needed by the community. We need to bring together the resources of the local library, the Extension Service, continuing education facilities, and modern telecommunications technologies to create the new "one-stop shopping centers" for rural citizens. Our 80 million rural citizens deserve nothing less.

CONGRESSMAN BROWN: Thank you very much, Mrs. Warden.

I think you have shown an excellent appreciation for both the needs of rural communities and the potential of the library for meeting those needs.

Senator Andrews, do you have any questions?

SENATOR ANDREWS: You emphasized the need to ensure that libraries provide those less able to provide for themselves with information so they can successfully compete with the larger farmers who can afford the computers and other services. Would you anticipate that these libraries would have direct contact with services such as AGNET and could provide for the individual who came to the library with the latest information?

MRS. WARDEN: Yes, I would envision having services like AGNET in the library, with people trained throughout the country in the use of this equipment through techniques available on their own television sets at home, or through group training. The rural community would have access to technology and information such as they would have in larger communities.

SENATOR ANDREWS: Do you have such a program going now?

MRS. WARDEN: Another witness will be talking about that. We have a display here at the World Future Society Assembly that shows what could be done and what kind of equipment could provide the most information.

CONGRESSMAN BROWN: Thank you very much, Mrs. Warden.

I am going to deviate slightly from the program because of the exigencies of the congressional schedule. I am going to call at this time Dr. Myron Johnsrud, who is the state director of the Cooperative Extension Service from North Dakota State University. In the event that Senator Andrews is called away, he will get a chance to recognize his constituent.

SENATOR ANDREWS: If my electronic beeper happens to go off and I get up and leave, I hope you will understand why.

CONGRESSMAN BROWN: Would you like to say a nice word about Dr. Johnsrud?

SENATOR ANDREWS: I have known Myron for a number of years. He has been out on my farm and knows the mistakes I make in agriculture and the pluses I might have in agriculture. He probably knows more about me than I want too many people to know. But he is a darn good Extension worker for the State of North Dakota. He has a great academic background. He is practical. And he has an inquiring mind that keeps him delving into new techniques and processes. I'm sure this is the reason he is here today.

Welcome, Myron. It is grand of you to be here.

Statement of Myron D. Johnsrud, State Director, North Dakota Cooperative Extension Service.

I'm pleased to have an opportunity to provide testimony at this hearing on the adoption of electronic technology in rural areas. The potential of this emerging technology to change the face of America, both rural and urban, makes holding these hearings extremely important and timely. I intend to use my allotted time to provide a bit of *historical perspective* regarding both electronic technology and rural areas, to comment on the *nature of technology and its adoption, and to explore types of applications* most likely in rural areas and *implications of electronic technology adoption* in rural areas.

Throughout the development of this country, there has been a continuing struggle to cope with the vastness of our geographic area. From the initiation of the pony express to the flights of the Columbia space shuttle, our history is filled with attempts to keep man in close contact with each other as well as we explore the environment in which we exist. Along the way, we've watched the development of highway, rail and air networks, establishment of a national postal system, a fostering of nationwide electronic media networks, and a nationwide--in fact, worldwide—telephone network.

While some of these developments have been sole efforts of the federal government in response to a perceived need by the citizens, others have been private sector developments in response to economic demands exhibited by users.

The desire to be informed is powerful! In our part of the country, from the early days of radio, I could watch the yard lights on neighboring farms disappear almost simultaneously with the conclusion of the 10:00 p.m. news.

As we look at the nature of technology and technology adoption, we've often heard that necessity is the mother of invention. But the widespread eventual application of that invention rests on mass production and innovative promotion to stir the latent desires among the masses for the services the invention can deliver. While the idea of a horseless buggy was evolving, the low price possible through Henry Ford's mass production factory process allowed the idea of a private automobile to enter the minds of all Americans. It was impossible at the outset to envision the transformation that automobiles would encourage on this emerging society. In similar fashion, the development of the microprocessor chip that is the foundation of the miniaturization of calculators and computers grew out of necessity in the space program. The secret to successful mass production of the chips is the basis for our expectation that personal computers will be commonplace in 1990.

Two motivating forces seem to be observable as we consider the technologies that have been successfully adopted. They have either added to the adopter's economic security (increased profitability) or personal comfort (reduced drudgery and boredom). While the cliche about building a better mousetrap as the way to success is a neat concept, you'll not find many mousetrap manufacturers listed in Fortune 500. The rapid development and adoption of *profit-increasing technology* in the industrial sector is at the base of the high standard of living and economic strength of this country. Likewise, the technology that *reduces human drudgery*—automatic barn cleaners, dishwashers, hay balers, *or that reduces boredom*—movies, television, personal transportation services, and the like, has seen widespread adoption through our history.

The widespread adoption of electronic technology seems imminent because in many cases its most logical applications satisfy both of the motivating factors I've suggested earlier. Both the communications and the processing components of electronic technology can be applied in very profitable as well as personally satisfying uses.

Just as society struggled to create and find the best uses for those earlier communication systems and to integrate them with each other, now it must struggle to create and find the

best uses for a system of computers and to integrate this with all our other communication systems. The process is the same, and the struggle will be similar. But there is at least one significant difference between the kinds of systems we have put in place before and the one we are creating today. The difference is this: earlier systems were designed to deliver information; a computer system is designed not only to deliver information but also to process it, manipulate it, and transform it. A computer system can aid management decisions not only by delivering relevant data but by helping to analyze that data.

At this point the power of the computer is evident to nearly everyone, and few will doubt that in coming years it will affect nearly every area of our lives. Why this confidence? Past inventions which have been adopted on a wide scale have tended to share three major characteristics. They have been mass promoted, they have been mass produced, and they have increased economic security or personal comfort. All these are true of computers. They are promoted by nearly everyone—in our magazines and newspapers, in business and government circles, and in our schools. Microchips and other components have been mass produced to the degree that their prices have steadily fallen. As deliverers and processors of information, computers can deliver profitable information or entertaining information and can analyze a budget or play a game.

Let's look at types of applications. Electronic technology may be used in rural areas of the country very easily, first as a means of delivering information and second as a means of processing information.

While many applications of single-function computers for monitoring and controlling processes (home heating, machinery performance monitoring and adjusting, livestock feeding systems, etc.) have been made and will be made, the thrust of my testimony will relate to two other uses I see emerging in rural areas. They are enhanced communications in remote areas and technical applications for increasing farm efficiency and profitability. Besides decisionmaking aids, other thought-processing applications include entertainment and education.

Electronic information delivery in rural areas will develop more slowly than in urban areas, but not much more slowly. It is likely that people in many rural communities will soon have cable television, and they are now able to access television signals directly from satellites with home satellite-receiving dishes. Rural residents will soon be able to play video discs on the television screen by calling them up from a data bank linked to their home computer. They will have access to a great deal more information than they've had in the past. We've all heard the catalogue of possibilities: home computers able to call up material from a wide range of sources around the country, interactive systems, and so forth.

All of this is exciting, but it poses certain problems. There seems to me a very real danger of information overload—so much information becoming available that people will become paralyzed under the weight of it. More is not necessarily better; in fact, it may be worse. How many hours a day are people going to sit in front of a screen calling up information? How many more hours a day are they going to be willing to sit in front of that same screen calling up indexes in order to decide what information they actually need? How many hours a day can they afford to do this?

Time is money, and what the businessmen in particular need is the right information fast. They need someone to winnow the chaff and separate out the relevant kernels. In rural communities I believe the Cooperative Extension Service will play an important part in guiding individuals to the information they need.

Electronic processing of information perhaps poses even greater problems than does information delivery. We've been delivering information electronically to rural areas for more than a century. We've been processing it electronically in rural areas for only a few years. Farmers, as operators of complicated businesses, are likely users of computers, simply because it would seem that computers could make their businesses more profitable. But before they can use computer technology, that technology must be developed with their needs in mind, and then they must be taught to use the technology. I see the dissemination of this technology as a land-grant university responsibility. I see this for several reasons.

First, we in the universities have been developing computer technology for our own use, and it only makes sense that we should take what we have learned and teach it to the people of the state who also can use it.

Second, there is really no other single place farmers can turn for the combination of agricultural and computer expertise that is necessary for the development of programs they can use.

Third, we have been teaching management techniques to farmers since the beginning of the Extension Service, and computer technology is just one more tool by which farming operations may be improved.

The research and education process has just begun in terms of the application of computer technology on the American farm. During the late 1970's we were just starting to demonstrate how computers could be used to serve agriculture. University researchers and large agribusinesses and corporations were making effective use of computers and starting to solve some of agriculture's management problems. By 1990—just 8 years from now—it is likely that this process will have gone much further. By then it is likely that almost all

computer programs will be interdisciplinary, created by a combination of agricultural subject matter specialists. It is likely the dialogue between computers and users will be streamlined, and that programs will continually be updated in response to new ideas and feedback from users.

Also, it is likely that programs will be designed to be used by people with no knowledge of computer science, and that a beginning user will be able to obtain good results by answering four or five general questions posed by the computer. Expert users of the same program will easily be able to change it to meet their specific needs. Finally, it is likely that by 1990 integrated systems for mini, micro, and large-frame computers will have been developed to provide maximum flexibility and usefullness of all the components.

As a result of all this, by 1990 whole-farm computer management programs probably will be capable of managing all farm crops and operations, allocating labor and resources to each enterprise on a farm, monitoring each farm enterprise, updating the computer data bases using the computer's own record keeping system, and predicting the long-range impact of changes in any farm enterprise.

There is no question but that we in the university community, along with our counterparts in the private sector, can develop the technology to implement whole-farm management programs such as I have described. How readily farmers will adopt this technology will depend largely on whether they find it profitable. My conversations with progressive farmers lead me to believe that they view a computer as a tool, like a combine or a field sprayer. If it will increase their profitability, they will quickly adopt it. If it won't, they'll ignore it.

What are some implications for rural areas? In my opinion, continuing adoption of rapidly evolving electronic technology is certain. Because of communications technology already in place, as well as breakthroughs likely to occur, rural areas are becoming less remote in a real sense. The idea of a North Dakota farmer being able to run a computer in Lincoln, Nebraska, from the county agent's office in Killdeer, North Dakota (or any other Extension office in the state) was unthinkable a decade ago.

The motivating forces for rapid adoption of this technology are strong. Many of the effects of its adoption are currently unknown, and some are not even imaginable. A few that we should be alerted to are:

(1) The impact on the structure and composition of agriculture.

Some people have argued that computerized decision aids will enhance the management skills of less competent operators to make them more competitive for farm resources. A counterargument is that top level managers will be more imaginative and effective in the application of electronic technology, just as they have been with other innovations in the continuing battle for survival and success. Since the nature and existence of rural communities are so closely related to the agricultural sector, this issue will be critical to the quality of life for many rural people.

(2) The reduced need for physical contact through improved electronic communications will impact the socialization process for growing children.

A child whose competitive game experience is restricted to Pac Man or Space Invaders may never get the humanizing experience of a punch in the nose over a close call at second base. While the punch in the nose is never to be relished, the feelings associated with differences in opinion, errors of judgement, and human frailty are what makes life dynamic for most of us.

(3) The possibility of data overload is real.

Unless we design information screening and processing components into our overall system, the massive flow of materials will overwhelm the minds of most users. A critical feature of good decisionmaking is to consider all the relevant facts simultaneously and draw a conclusion. Since large volumes of data are available at the press of a button, isolation of the relevant facts to the decision at hand may be a major decision in itself.

(4) Rural people are geographically farther from each other than urban people.

In the past, communication systems have often had a correspondingly greater effect on rural people, frequently a dramatic effect, as these systems brought them into close contact with each other and with the rest of the world. The new systems we are developing today will do exactly what telephones, telegraph, trains, and stage coaches did in years gone by: they will bring people in the hinterlands closer to those in population centers, and we hope they will make life more profitable and more comfortable for both.

One can only conclude that the electronic technology tidal wave will impact the social and economic environment of rural America. How this technology will work out in the context of individual economic benefit or social enhancement remains a question. My judgement is that the answer will be positive on both counts.

CONGRESSMAN BROWN: Thank you very much, Dr. Johnsrud. That was a very informative statement.

Senator Andrews?

SENATOR ANDREWS: I certainly enjoyed your presentation, Myron.

How many farmers in North Dakota are now on the computer?

DR. JOHNSRUD: It is hard to get a percentage on that, but we think it is less than 2 percent. However, as you look at AGNET, which is a rather major program we have for farm decisionmaking, that number grows weekly. And we currently have about 150 external users alone on that system.

We have not been able to get a good handle on how many actually have home computers. I can comment, though, that it isn't unusual for a farmer to come into the office and say, "I have had a small computer in my home for 2 years. I have been playing blackjack on it. I'm tired of that. How will it fit in my farming operation?" So the computers are out there, and farmers are now learning to apply computer technology to their farming.

SENATOR ANDREWS: What state has the greatest percentage of farmers on the computer? Do you know?

DR. JOHNSRUD: No, I don't.

SENATOR ANDREWS: Do you have a bulletin of computer use on the farms? You must put together a bulletin. Could you send a copy of it to Congressman Brown?

DR. JOHNSRUD: Sure will.

CONGRESSMAN BROWN: It has come to my attention, partly as a result of our agriculture subcommittee hearings, that some of the farm organizations are actively pursuing the development of programs. The Farm Bureau, for example, and some computer firms are beginning to look at the rural or agricultural market and develop systems that will meet the needs of that market.

So your projection about how fast this will develop may not be fast enough. If it catches hold and gets a push from both the organizations and manufacturing companies, this could go like wildfire in rural America.

DR. JOHNSRUD: If I may make a comment, therein lies an issue. If you watch the advertising for computer technology, you begin to feel that if you don't have one in your farm office, you are behind the times. In my opinion, some of us can well utilize that technology on our farms. For others, it is not a good investment.

SENATOR ANDREWS: There is another computer rule, though, which is "garbage in, garbage out." It is extremely important that as farmers invest in these computers, they have access to useful programing so the computers can in fact be helpful instead of just a way to play blackjack. Incidentally, we now do this to support prairie public television and some other good things. If anybody wants to come and play $2 blackjack in North Dakota, you can help support a number of great causes!

George, my apologies. They scheduled the first vote on the tax bill at 10:30. When my beeper goes off, I have exactly 15 minutes. Contrary to public thought around here, we do get arrested for speeding. I will have to do a lot more apologizing if I am not there to vote shortly. Please excuse me, but I know I am leaving matters in excellent hands.

CONGRESSMAN BROWN: Thank you very much, Senator, for being here.

Next, I am going to call as a witness a young man by the name of Jason Hardman. And I am going to ask Congressman James Hansen of Utah, who represents Mr. Hardman, to come forward and introduce Jason.

Jason, is that your father you have with you there?

CONGRESSMAN HANSEN: Yes, it is his father.

CONGRESSMAN BROWN: I want Jason to do this right. He may be a Congressman someday.

Now, I first will recognize Congressman Hansen. I appreciate your being here. And you may say a few kind words about your constituent because if he is going to be a Congressman, it will be your seat.

(Laughter.)

CONGRESSMAN HANSEN: I realize that, Congressman. And I hope when he is ready to take it, I am ready to get out.

I am very pleased today to be able to introduce Jason Hardman at this joint congressional hearing, Congressman Brown. Jason's service for the people of Elsinore, Utah, a town of 600, is a fine example of what the volunteer spirit and individual initiative can accomplish. His community and his fine parents, Wayne and Linda, can certainly be proud. We can all learn a great lesson from Jason's achievements. He had the vision that he could create a library. He kept his goal before him, and he didn't let a number of obstacles stop him from reaching his goal. Jason and his parents, who supported his efforts, deserve our praise and admiration. Jason's community had a need for a library, and Jason filled that need. I am confident that his example will provide this committee with information it will find useful as it continues its admirable efforts to assist local communities to bridge the rural information gap. Jason has a very interesting story to tell; I am sure he can tell it much better than I can.

CONGRESSMAN BROWN: Mr. Hardman, do you want to say a few words before Jason speaks?

MR. HARDMAN: The only comment I want to make is that this speech Jason is about to give is entirely his own. He

received no help from his mother or me except maybe to help him with his English. But these are his own ideas entirely.

CONGRESSMAN BROWN: All right, Jason, you have gotten a big buildup here.

STATEMENT BY JASON HARDMAN OF ELSINORE, UTAH

MR. JASON HARDMAN: My name is Jason Hardman. I live in Elsinore, Utah. I was born on the 21st of October, 1969, at the naval hospital in Bremerton, Washington. I briefly lived in Pleasant Grove, Utah, and then for 3 years, I lived in San Diego, California. We moved to West Jordan, Utah, and I started school there. West Jordan is a suburb of Salt Lake City, a large city that has many libraries and information centers. In 1976, we moved to China Lake, California. It was there that I really started to read a lot. China Lake had three libraries available to me plus a large library and information center at the local junior college.

I had cards at each of the libraries I was able to get into. It was nice because almost anything I wanted to know about was in one of these libraries. I was able to find information about almost any subject so that I could complete my school assignments with no problem. I also could find many interesting novels to read or books about subjects I wanted to study. There was plenty of reference material, and I seldom had to share with another student or wait in line in order to check out the book I wanted. From living in the Salt Lake Valley and in China Lake, I learned what a library was and what it could do for me.

In 1978, we moved to Elsinore, Utah. Elsinore is located about 160 miles south of Salt Lake City in the Sevier Valley. The largest town is Richfield, located 10 miles to the north. Richfield has about 6,000 people in it. In Sevier Valley are several small towns containing a few hundred people. Elsinore is one of them. Elsinore has a population of 600 people. They are mostly farmers and ranchers. Monroe is another nearby town located 6 miles to the south. Monroe is larger with a population of 1,200 people. Richfield and Monroe each have a library.

I still read a lot, but there wasn't a library in Elsinore so I had to go to Monroe. I was only allowed to check out three books a week. I could read them in two days, and then I had to wait until I was allowed to check out three more. Once in a while, my father would take me to Richfield, and I was able to get more books that way. Both of these libraries are small and never had a very good selection. Going to the library at Monroe got very tiring, especially since I had to ride my bicycle. And carrying three books on a 10-speed bike isn't an easy task. The elementary school in Monroe, which I attended, had a library, but it, too, was small. And the books they stocked were beneath my reading level and of not much interest or challenge to me. I couldn't even find help in doing most of my school assignments. Reference material that was there had to be shared with everyone else in class.

Elsinore had a library many years ago that was run by the Literary Club. It passed by the wayside, but some of the books were kept stored in the bottom of the cultural hall. They were pretty old, but in fair shape. At that time, my mother was vice president of the Literary Club, and she helped me gain access to these old books. They weren't very good, but this is when I got the idea of starting a city library. And stored in these boxes were enough books for a good start.

I talked to the Literary Club, and they gave me permission to use the books if I could get the city council to let me start a library. This didn't prove too easy. I went to several city council meetings, but they wouldn't give me an answer. Later I found out that they didn't believe I would stick it out, and they thought sooner or later I would give up the idea. They were also afraid the library would end up costing a lot of money, which the city didn't have. Elsinore is not a rich town, and the little they do collect from taxes is badly needed in other areas.

I decided that this was not going to stop me. I continued to call the mayor every night until I drove him nuts. (Laughter.)

Finally, out of desperation from my continued harassment, he gave in. The city council, out of pity for the mayor, gave in also. They gave me three conditions that had to be met before I could proceed. First, I had to agree to do all the work and supply all my own materials without help from the city. Second, I could not expect future help from the city to help run it. Third, I was to have an adult present each time I opened the doors.

My father said he would find the money somewhere, so I agreed to the first and second conditions. But the third condition, I could not accept. I felt that if the adults didn't want to help run it, then I didn't need their supervision either. (Laughter.)

When I told the city council that, they became reluctant to okay the project. I told them I would call each one every night until they finally gave up. Knowing the mayor had been through enough already, they quickly gave in on the third condition.

The council had an unused room in the basement of an old school house they had converted into a town hall. It was dirty, in need of repairs, had a cement floor, and was unheated. They told me I could use it. It was all they could offer, but at least it was a place for the books and a good place to start. I understood why they didn't want me to start a library, and I understand why there was no money available

to help me. But I was very happy that they gave me the place and the opportunity to start the library.

I cleaned out the room, and with my family's help we got it painted and some shelves put up. Then I started calling everyone I knew, and a lot of people I didn't know, and asked for their old books. I was surprised with the response. The people of Elsinore wanted a library as badly as I. And when they heard I was going to start one, they were very enthusiastic about it and generously gave me what they could. Every night when my father came home from work, we would take the pickup truck and go gather up all the books I had found during the day. Soon, I had more than a thousand books.

The Richfield weekly newspaper heard of my problem and ran a short story on me. I soon had people from all over Sevier Valley calling me to pick up their books. Even the Richfield City Library donated their duplicate books. Within 2 months I had over 4,000 books. And with that, I opened my library.

I set my hours from 4 to 6 p.m. on Tuesdays and Thursdays. It was not unusual for fifteen kids and grownups to visit the library and check out books. I still keep the same hours, and people still keep coming up. I haven't been able to get enough money for a card system so when someone wants to check out a book, I write the patron's name and the title of the book on a list I keep. I don't charge fines for overdue books, mainly because we seldom have anyone late in returning them.

I don't have a catalog system yet, so my books are arranged by subject matter, such as children's books, education, history, religion, fiction, westerns and reference material. I do, however, keep a large selection of Harlequin romances in a special section. The ladies like those. And that way, they don't have to search to find what they want.

Several months ago, a story about my library was released by the Associated Press, and the story went worldwide. I have received many letters and books from all across the nation and as far away as Germany. I even received two autographed books and a nice letter from Steve Allen and several other authors. I was very happy with the response I received from the article because my library has quickly grown to over 6,000 books. I also received $195 in badly needed donations.

We have had problems come up, but we took care of them. We needed electricity, and I talked to a local electrician who donated his time and material. Now I have lights so we can see the books. The cement floors were cold, so I located some old carpet pieces and the people donated them to me. I have a multicolored floor, but at least it isn't cold.

We have no heat, and in the winter it gets cold. We are now trying to raise the money for an electric heater to keep me and the other kids who come there warm during the winter. However, since I am in the basement, the summer heat never penetrates the thick stone walls, and I have the coolest spot in town. The kids really like to visit the library in the summer because it is so cool. We are in bad need of some more bookcases, tables and chairs, filing cabinets, card systems, and all the other things it takes to run a library. All these things take time and money. We will eventually get them somehow.

During the whole time I was putting the library together, I talked to a lot of people and came to some conclusions about my situation. I was not alone in needing a library. Other people besides me needed information or recreational reading or help in preparing school assignments. Everyone seemed to want information about many subjects; it was just not available in Elsinore. They, too, had to travel to Monroe or Richfield because their libraries were small and not of much help. We cannot blame Richfield or Monroe, because they didn't have the money it takes to run large libraries or learning centers like I was used to.

I don't know what it will take or how it can be done, but sometime in the future I would like to provide all my friends and neighbors with a library like the people in large cities have.

I thank you for your time and patience for letting me tell my story.

(Applause.)

CONGRESSMAN BROWN: You did well, Jason. I have listened to a lot of witnesses at hearings, and I can tell you honestly that there are very few that have given a more coherent and interesting statement than you have given.

Let me ask you, have you given much thought to this matter of new library technologies, these computers, electronic hookups, and that sort of thing?

MR. JASON HARDMAN: Yes. I have given it a lot of thought, and I would want to have it.

(Laughter.)

It would be a lot of help. You can help provide books better and stuff.

CONGRESSMAN BROWN: Have you ever used a computer to access, say, another library or a library card file in another city or anything like that?

MR. JASON HARDMAN: No.

CONGRESSMAN BROWN: Do you realize it is possible to do that?

MR. JASON HARDMAN: Yes.

CONGRESSMAN BROWN: You said you lived at China Lake for a while?

MR. JASON HARDMAN: Yes.

CONGRESSMAN BROWN: That is in California, isn't it?

MR. JASON HARDMAN: Yes. There is a naval weapons center up there.

CONGRESSMAN BROWN: They have a lot of these electronic gadgets up there; its a good place to learn.

I don't know what else I should go into, Jason. I have a feeling that if I probe deeply enough, I can learn a great deal from you.

Are you planning on continuing with the operation of the library for a while?

MR. JASON HARDMAN: Yes.

CONGRESSMAN BROWN: What will happen after you no longer manage the library? Do you think that you can develop it to the point where the city will take it over as a city library?

MR. JASON HARDMAN: Probably. After I am in college, I will probably let the city run it or something like that.

(Laughter.)

CONGRESSMAN BROWN: Do you have a written contract with the city? I would suggest you get something in writing before long, Jason.

Mr. Hardman, do you have anything you would care to add to Jason's testimony on this matter?

MR. HARDMAN: No, sir. I think that Jason has pretty well said it all. There was a need, and he took care of it on his own.

CONGRESSMAN BROWN: Well, we certainly would like to encourage more people to do that.

Well, thank you very much, Jason, for your excellent testimony. It has been outstanding. I would like to get better aquainted with you. And I really do look forward to following your career. With the kind of initiative that you have shown, there are no limits to what you can achieve, I'm sure.

Thank you very much for being here this morning.

Our next speakers are Glenn Wilde and Betsy Peters. Dr. Wilde is Assistant Dean for Extension at Utah State University, and Dr. Peters is Coordinator of Special Projects at the University of Wyoming. Both of them have considerable experience in the subject of our discussion here.

Would you care to start, Dr. Wilde, with your testimony?

Statement of Glenn Wilde, Assistant Dean for Extension, College of Humanities, Arts and Social Sciences, Utah State University

DR. WILDE: It is a pleasure to be here at a Joint Congressional Hearing, Congressman Brown. And it is our pleasure to present testimony concerning needed informational and educational services of residents in the Intermountain States of Colorado, Montana, Utah, and Wyoming. For nearly 3 years, a cooperative assessment of rural informational and educational needs has been undertaken by a project team comprised of faculty from four land-grant universities;[1] staff from the State library commissions; and librarians, schoolteachers, businessmen, and elected leaders who reside in rural communities in these States. These research and assessment efforts have been supported in part through a small grant from the Western Rural Development Center, one of the four regional rural development centers, and through staff support from the universities and State libraries. We have also received staff support and encouragement from the National Commission on Libraries and Information Science, the National Agricultural Library and the U.S. Department of Agriculture. So it is a cooperative effort to develop a rural delivery system for education and information.

In our Intermountain States, like much of the rural United States, most of the informational resources are concentrated in the urban centers, especially in college, university, or State libraries. Our rural libraries in the Intermountain States, in general, have limited scientific or technical informational resources, and they primarily serve the leisure interests of the public, which is a needed community function.

But by generally serving only this leisure reading population, the rural library is perceived to have a limited role within the community, and it does not enjoy the luxury of an adequate budget, modern equipment, and, in some places, even a telephone. Though residents in general have a very positive attitude toward the community library, they perceive it as a place for general reading, one which lacks information specific to individual or community problem solving.

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[1]Cooperating universities include Colorado State University; Montana State University; Utah State University and the University of Wyoming. The University of Idaho was a member, but the State financial outback eliminated their further participation.

Recently I talked with a rural lawyer about his information needs. He, fortunately, resides in a community with a relatively good law library, but in attempting to find information about the relationship between milk production and cattle-fed supplements for a client involved in litigation, he was at a loss. He could not find relevant information necessary to establish credible arguments, at least credible enough to be convincing to a jury. Instead of consulting the resources in the public library, the lawyer telephoned a dairy specialist at the land-grant university, who, in turn, had to search for the information from the university library. This was time consuming for the dairy specialist and somewhat costly, but it was necessary for adequate representation of the client.

The lawyer would have been willing to have paid for an information search had such services been available and known through the public library. This is also true for other types of professional and small business groups in rural communities: the rural teacher, the rural elected officials and community planners, the rural farmer or rancher, and the rural doctor or nurse need continuous information to provide essential community services. To serve these professional and business information needs represents a "target of opportunity" for our rural libraries, especially in the information-poor rural communities throughout the intermountain West, and perhaps throughout the United States. In addition, most rural residents lack the skills, at present, to comprehend the services available by utilizing informational technology or data base searching. As an information specialist, the rural librarian can strengthen this service to serve broad needs of potential community users.

I would now like to share with you some of the information our intermountain group has gathered over the past 2 years of community development activity. Our regional group solicited information from identified community groups who were "users" or "potential users" of informational and educational/training services. The communities were selected from the four intermountain states on the basis of four factors:

(1) potential or experienced population growth,

(2) an existing community library facility that could become a community learning and information center,

(3) the willingness of the local community librarian to work with improved information delivery, and

(4) the support for innovation from the community library board, school districts, and county and city government leaders.

We developed what we call a "Community Interest Inventory," a survey instrument given out to users or potential user groups who could benefit from informational resources if available. We sought three kinds of information:

(1) local attitudes toward informational and educational services, and the sources for those services,

(2) resident assessment of the quantity and quality of the local informational resources available to them, and

(3) what residents considered to be their needs for information and/or educational/training programs.

In addition, we obtained vital demographic and statistical information concerning the respondents.

We discovered that the rural communities in Wyoming have needs similar to those of the rural communities in Utah, Colorado, and Montana. Regionwide, more than 60 percent of our community respondents indicated they had sought information during the past year. Furthermore, these rural residents sought information from a number of local community sources, including the local library, county Extension offices and other local information agencies. The community library, even with its limited informational resources, is a primary source that residents use.

However, nearly 30 percent of the regional respondents who had sought information had to send out of the community for the information they needed. Even by sending for the information, over half of these rural residents received only "some" information related to their needs. Nearly one-third of the respondents had to leave their community to get the needed information—in the West, that often means 3 or more hours' drive to a larger library or state agency. This also points out other problems for rural and possibly urban information seekers: how do they locate relevant information among the various state, federal, or private sources, and how do they gain access to it if it is available?

Not only were rural respondents in need of additional informational resources, but more than 65 percent of them had participated in some organized educational program during the past year. Again residents often had to travel great distances to enroll in many of these programs. From their written responses, our "inventory" has produced a listing of educational subjects and programs that evidently are not being satisfied fully by local educational organizations. Furthermore, these "requests" or desires are found in all eight target communities in each of the four intermountain states.

One of the more "pressing" needs for educational and training programs is in the area of family and human development, especially in communities subject to rapid population growth because of energy resource development. However, other areas were also requested by the regional respondents, including needed programs in adult basic education, recertifi-

cation programs for school teachers and other community professionals, and practical learning programs in CPR methods, family health and nutrition, and drug abuse control.

There are thousands of educationally disenfranchised learners in our rural communities, and we believe the rural public library has an opportunity to serve these learners, especially if it is linked to the vast educational resources of universities, the Cooperative Extension Services and many private educational organizations. The vast network of community libraries represents to us a delivery system for the future development of rural America, particularly rural western America. There are existing, locally supported institutions which, with local willingness and direction, can become rural community learning and information centers to serve both informational needs and learning and training needs for rural residents.

Lower cost computer-assisted information transfer is now a reality. National, regional, and state data bases are available to transmit to the rural information seeker the relevant and timely information which can address an individual's problems. Again, telecommunications—teleconferencing, videotape, and videodisc, satellite transmission, and interactive computer-assisted learning programs—will link the metropolitan and university resource centers to the rural community learning and information center. Vacant areas, including basements, will be equipped to carry out formal educational programs, which can link groups of rural learners in various community sites simultaneously and can provide relevant training and enrichment programs to rural residents who have limited access to educational programs or post-secondary education.

Five years ago, such a concept for rural service delivery could not have been possible. The cost of telecommunications equipment was too high, the informational resources were not developed for user access, training programs for librarians in the use of sophisticated information systems were not widely available, and there was more interest in developing the data base or the communications technologies than in transmitting informational resources to users. Today, however, that climate has changed. There is interest and need for the effective transmission of informational resources and training programs, especially to the information-poor and educationally disenfranchised rural Americans. We are convinced that purposeful implementation of information and learning technologies in rural libraries will enhance the opportunities for rural residents and at the same time strengthen the productive capacities of our nation as a whole.

I thank you for this opportunity, Conressman Brown.

CONGRESSMAN BROWN: Dr. Peters, would you go ahead with your statement?

Statement of Betsy Peters, Director, Special Projects, School of Extended Studies, University of Wyoming

DR. PETERS: I want to thank you very much, Congressman Brown, for inviting us to testify today.

My name is Betsy Peters, Coordinator of Special Projects at the University of Wyoming. For the past 2 years, I have been working with Dr. Wilde from Utah State University and with representatives from Colorado and Montana in the project which he has briefly described to you today. My remarks apply primarily to the State of Wyoming and illustrate the ways that this library project will meet education and information needs of rural areas.

Wyoming is a large state, the ninth largest in the nation, with a very small population. However, each person is important and has needs for education and information similar to those of people who live in parts of the country with a myriad of opportunities.

CONGRESSMAN BROWN: Is that a map of Wyoming?

DR. PETERS: This is a map of Wyoming. It depicts Wyoming as a big, bare, noninhabited area. Some people who drive through on the interstate think that Wyoming is nothing but an expanse of sage-covered desert. But I assure you this is not true.

If Wyoming is compared in area with Massachusetts, it is easy to see the difference in size. Massachusetts, which has many more people and many, many more people per square mile, has over 100 institutions of higher learning, providing easy physical access from every part of the state.

Wyoming has a fine system of higher education. The system is well financed and provides quality education. However, in contrast to Massachusetts, there is only one 4-year and graudate institution in the state, the University of Wyoming (located in Laramie), and seven community colleges which offer 2-year programs. The university and the colleges have a commitment to outreach, and they try to provide academic credit work and other noncredit services in the state. I don't know whether you can read these graphics or not, but they show that the closest colleges are 50 miles apart. This illustrates the difficulties of an outreach program. Students who are not able to take up residence near one of these colleges find it hard to pursue a degree. Even students who could commute 50 or more miles are hindered by adverse weather conditions which often necessitate closing roads during the winter. Some parts of Interstate 80, for instance, were closed 17 times last winter.

The needs of Wyoming residents have been changing and increasing during the past decade. Wyoming has experienced the third highest growth rate in the United States, with a population increase of over 40 percent. Many of the new residents

are associated with growth industries, especially minerals, and live in small communities located far from sources of education and information.

The population of Hanna, a mining town, increased from 460 people in 1970 to 2,288 in 1980, a 397-percent increase. That of Mountain View increased by 255 percent and the population of Converse County increased by 136 percent. These increases sound spectacular, but let me re-emphasize that Wyoming is still sparsely populated and completely rural. No city has a population of over 60,000, and 78 percent of the people in Wyoming live either in rural areas or in cities under 25,000. In fact, Congressman, there are 20 cities in the United States that have populations greater than the entire State of Wyoming.

In the proposed project, the library becomes the center of a system designed to meet the needs for information and education. In conjunction with the land-grant university and the state library, and with the use of technology—computers, electronic communication, and other marvels—the system will provide the human element which will prevent long-distance learning from becoming impersonal, sterile, and removed from contact with human beings and human brains.

Libraries were chosen because they are established and respected institutions, widespread throughout the area. Libraries traditionally have served all age groups and all segments of the population. The libraries already have a bulk of resources as well as a system of networking and cooperation. The libraries have ties with their communities, and they have a continuing understanding of community needs in information and education. Library staffs, because of the tradition of serving the public, can provide the human link between the learner and the equipment as we adopt more and more technology—hardware, if you will—and apply it to the learning process.

The library system in Wyoming is strong and statewide. The accompanying slide shows the location of county libraries and branch libraries. Clearly, we have a basic network in place to provide learning and information. At present, however, our project is a limited one, a pilot project, embracing only two libraries in each of the four states. Rawlins and Douglas have both had exceptional growth in the decade of the seventies, and the county rural population has increased. Not only new people, but new types of people, have moved into these areas: people who need more services and more varied kinds of information and education, ranging from isolated facts which can be produced by computer data bases to academic degrees which, if offered in these areas, will have to be delivered by nontraditional means.

The Intermountain Community Library and Information Service project fits in very well with the recommendations of the Wyoming Governor's Conference on Library and Information Services incorporated into the recommendations made by the 1979 White House Conference on Library and Information Services, especially those recommendations for use of new technologies, services to rural citizens, cooperation between libraries, and the provision of technical and professional materials.

We welcome Congressional support for projects such as ours.

Thank you, Congressman Brown.

CONGRESSMAN BROWN: Thank you very much, Dr. Peters and Dr. Wilde.

I think you both illustrated the kind of useful projects that help to develop the human resources and the culture of our rural communities.

I am not too sanguine that one can look to Congress for much help in supporting these projects for the next year or two, but I wouldn't give up hope for the future. I think we have probably been able to anticipate a resurgence of support for activities of the sort that you have described here, and I am looking forward to that myself.

DR. PETERS: At this time, Congressman Brown, we are not asking for any financial support, but we do appreciate all the kind things you have said about the project.

CONGRESSMAN BROWN: Yes, I understand.

I don't have any questions for either of you at this time. And thank you very much for your testimony. We will look forward to seeing more about your activities, sir.

DR. WILDE: Thank you.

CONGRESSMAN BROWN: Our next witness this morning is Dr. Bernard Vavrek of the School of Library Science at Clarion State College, Clarion, Pennsylvania.

I understand, Dr. Vavrek, that you are the coordinator of the Center for the Study of Rural Librarianship.

DR. VAVREK: That's correct, sir.

CONGRESSMAN BROWN: I am looking forward to hearing about that.

Statement of Bernard Vavrek, Professor, School of Library Science, Clarion State College

In preparing for today's hearings, I have attempted to reflect on the circumstances that bring a person who grew up in a steel town in western Pennsylvania to our nation's capital to talk about rural libraries. When my family and I left Pitt-

sburgh about 11 years ago to live in Clarion, a town of about 6,000 citizens, we didn't realize that we would be counted in the next decennial census as part of the migration of some 9 million urban people. At the present time it's estimated that 27 percent of the people in the United States live in nonmetropolitan areas.

There can be little question that the institution most in need of recognition and attention in rural America is the public library. Eighty-two percent of the public libraries in the United States can be found in cities and towns of 25,000 or fewer people. While large metropolitan public libraries such as those in New York, Philadelphia and Boston receive the most attention, the mainstream of public libraries in the United States is located in the small communities of America—with names such as Browns Halleck, West Virginia; Stone Mountain, Georgia; or Skelleytown, Texas.

Any discussion about information services in rural America, however, begins with the definition of the word "rural." As you are aware, the United States Census Bureau equates "rural" with a town of 2,500 or fewer individuals. Based on this definition alone, it may be of some interest to know that Pennsylvania has the largest rural population in the United States, with approximately 3,600,000 citizens living in rural areas as legally defined. But the definition is inadequate because if there is one Standard Metropolitan Statistical Area (SMSA) within a county, the entire county population is defined as metropolitan regardless of individual circumstances.

Centre County was recently declared metropolitan because State College, Pennsylvania, where Penn State University is located, was classified as an SMSA. Yet in addition to State College, there are nine other towns in Centre County with an average population of 1,850. Increasingly, one will simply encounter the characterization "nonmetropolitan" as a hedge against the constraint of the SMSA standard. The Center for the Study of Rural Librarianship, for example, uses a population of 25,000 or fewer people as its model for investigation.

In many ways, rural information services seem to be at the threshold of tremendous development and change, but there are many real problems to recognize and overcome. I should like to review some of them.

First, serious challenges are developing for librarians who now must face the demands of citizens who have previously lived in metropolitan areas and have come to expect a variety of alternative informational packages from which to choose. It has been convenient to think of the rural library, for example, as being insulated from such things as online data bases, videotext systems, and other new developments. But the new rural populations include many individuals who have already experienced some of the latest technological achievements in obtaining or disseminating information and will expect the same services to be available in their new communities.

The National Commission on Libraries and Information Science is now engaged in an effort to convert the rural library into a community information service center. I hope that the thrust of this concept will, at the very least, cause many rural communities that have not provided their libraries with telephones to do so. For example, in a national survey just completed by our center dealing with public libraries, it was discovered that 6 percent of the responding librarians were still without telephones. Librarians responding in places of 2,500 or fewer individuals showed that on an average, 14 percent were without telephones. While 6 percent or 14 percent of public libraries without telephones may seem to be inconsequential, this must be considered as only one of a variety of unique problems complicating the future of communications in rural areas.

Sir, as an aside, I would like permission to enter into the record the copy of our report, which in fact represents the first national survey of public libraries in rural areas (appendix 2).

CONGRESSMAN BROWN: I would very much like to have that in the hearing record.

DR. VAVREK: Thank you very much.

The second problem is that rural life is characterized by geographical remoteness that provides the librarian with few other cultural and/or informational centers from which to draw support. Geographical isolation also makes it impossible for the rural librarian to have regular professional contacts with other librarians or information specialists. This situation is considerably different in a metropolitan area, where one has relatively easy access to multiple resources—generally within the radius of a few blocks—that may be pursed until a satisfactory answer is found. In many rural communities there are no additional sources of information to augment those of the public library.

Third, the status of rural librarianship can also be viewed most vividly in terms of per capita financial support. Per capita financial support for rural public libraries in Pennsylania, for example, averages about $3.25. Compare this figure of $3.25 with the overall per capita average in my state, which is $4.92. At the same time, average per capita support for libraries in Pittsburgh was $7.35 and in Philadelphia it was $8.15.

Fourth, in research also conducted by our center, it was discovered that the average size rural library book collection was approximately 14,400 items. Compare this with the simple fact that over 40,000 new books are published in English each year. To meet citizen demand, it is not unusual, for example,

for a rural librarian to borrow a thousand books from other libraries during a 1-year period. While the interlibrary loan process is potentially effective, the inability to satisfy user demands in a real-time response mode, as opposed to waiting several days or weeks, reinforces the image of the public library as only a modestly helpful place.

Fifth, as severe as are the problems already cited, there is little doubt in my mind that the key issue facing the immediate, as well as the future, development of information dissemination in rural America is the lack of professional library staff. Nationally, only 25 percent of the librarians currently working in rural libraries have attained the master of library science degree—the prerequisite necessary for the first professional level of employment as mandated by the American Library Association. Further, and quite ironically, the number of paid library staff members in communities of 2,500 people is three—fewer salaried individuals than one would find in the local drugstore. Logically, it would seem that the solution to the staffing dilemma in rural areas would be to increase the number of librarians available. But not everyone is suited to deal with the relative isolation that is characteristic of a rural community. As a result, one encounters enthusiastic, trained librarians who simply cannot manage living in a small town.

The issues relating to the staffing and training of rural librarians also go beyond the immediate dimensions of supply and demand. For a school of library science, the problem is essentially how an educational institution can deal with two distinct audiences—one concerned with academic credits and the pursuit of degrees, and the other clearly oriented in the direction of continuing education and nondegree activities. Normally it is expected that individuals with degree-seeking interests and those concerned with continuing education activities overlap. In dealing with rural audiences, the dichotomy is sharper. The major vehicle utilized to improve the competencies of working librarians has been and continues to be the workshop/conference type of approach as seen in West Virginia, Ohio, Illinois, Iowa and other states. In fact, it is the mainstay of library science training for rural librarians in the United States.

Over the last several years, the School of Library Science at Clarion State College has attempted to organize continuing education activities particularly designed to meet the real and perceived needs of a rural clientele.

These workshop/conferences have been relatively successful, but the road (with no pun intended) has not been without its bumps. Some librarians have complained about the registration costs—which have always been kept artificially low. Another complaint is the traveling distance to Clarion—mass transporation in rural America, of course, consists of one's automobile. Rueful comments also have been heard regarding the fact that staffing patterns in the rural library do not allow for enough flexibility to permit staff members to attend the workshops and still maintain library hours.

The last problem is most severe. In fact, conditions of salary and staffing are such that a permanent "underclass" of individuals is kept, in a real sense, geographically and educationally isolated from the mainstream of librarianship in the United States.

There are those who, in considering a "quick fix" to the problems of providing critical information to rural Americans, suggest an abandonment of the public library. Frequently, these individuals will consider an alternative that would be conveniently described as an "electronic connection." While there can be little doubt about the significance of electronic forms of information dissemination, it must be remembered that interpersonal, face-to-face communication continues to be the major way in which rural citizens gather data.

In the long view of things, this concern for interpersonal relationships doesn't preclude an electronic mode. But the concept of the public library as the community's information center, with its historical function to protect our privacy, our democracy, and our cultural heritage; and its practical role to answer the questions of citizens, farmers, government officials and children, are critical realities that must be understood initially before any changes are made.

For those unfamiliar with rural America, "it" cannot be perceived from the middle of Washington, D.C. A more illustrative path to follow is Interstate 80. A better understanding comes from following the signs that point to Jersey Shore, Frogtown, White Pine, Curwensville, and so on. As one travels to these remote areas, the realities of rural communities—the difficulties of disseminating information of all kinds and satisfying the many needs of their populations—take on magnificent proportions.

In an effort to better understand and to take some action regarding rural libraries or learning/information centers, I propose the following series of actions. First, during the next year, it is suggested that some agency or agencies of the federal government be directed to systematically survey the dimensions of supporting information services in rural areas. Data would be gathered to provide further insight into the conditions affecting the information needs of rural Americans and the logistical support available from rural public libraries in terms of, for example, numbers of libraries, staff, resources, information networks, and so on.

Second, it is recommended that a federal agency be assigned the permanent coordinating responsibility for data gathering and dissemination in relation to rural public libraries on at least an annual basis. This thrust would be coordinated with the assistance of state library agencies.

Third, I propose the immediate formation of a group to be known as the Rural Information Caucus. Comprising this coalition would be a mix of individuals representing the public and private sectors whose common interest would directly relate to the issues facing the dissemination of information in rural America.

Fourth, I would like to suggest that a year from now, the Rural Information Caucus would organize a conference dealing specifically with the phenomena of providing information services to rural America. The audience would be composed of both the private and public sectors and would include, for example, Members of Congress, state librarians, farmers, the general public, representatives of the information industry, academic persons, Extension agents, rural librarians, and others concerned with this problem.

Fifth, I recommend that Congress consider new legislation, not unlike the Library Services Act of 1956, directed specifically toward assisting rural public libraries and spurring the development of information dissemination in rural areas. While it is suggested that this legislation consider a variety of concerns—for example, resource development, telecommunications, networking, to name a few—a very important portion of it should deal with training librarians. Without this provision, all of the preceding efforts will be fruitless.

Last, I suggest that Congress encourage the President to be responsible for the development of a national rural policy. This would be similar in design to the requirement that a national urban policy review be submitted by his office every 2 years.

One is deeply encouraged by the initiative of our Congress to examine freshly and systematically the information needs of rural Americans. Historically, one hopes that today will be looked back upon as the benchmark for a new vision of rural public library sevice.

CONGRESSMAN BROWN: Thank you, Dr. Vavrek. You have emphasized several times the importance of training and staffing for rural Americans. I am interested in knowing to what degree there would be a separate training program for rural librarians vis-a-vis other kinds of librarians. Most of the training, I presume, would be the same for both.

DR. VAVREK: Yes.

CONGRESSMAN BROWN: How much would be different? How much emphasis would need to be given to strictly rural kinds of problems?

DR. VAVREK: You are quite right: overall and systematically, the training would have to proceed on a generalized basis. But it would be my view that using a program criterion, let's say, of 36 credit hours, perhaps at least 12 hours would be sufficient as an introduction to the special concerns of rural America. This would be about four courses.

CONGRESSMAN BROWN: Is it your general impression that rural libraries, perhaps because of their smallness or underfunding, are less generally staffed with professional librarians?

DR. VAVREK: That is correct. In fact, our friend Jason would be more typical of a rural librarian than anyone else. That is not because he is twelve years old, but because he is a volunteer. The report which you have very graciously permitted to be entered into the record, shows how essential volunterism is to rural public libraries. As I recall, I mentioned that there were three salaried individuals in a typical small rural library. There are two volunteers who also make the total base of people who work in rural libraries.

So you have three paid staff and two volunteers. And in the cases where there are three paid people without the volunteers, the library could not be opened systematically. In my own state, volunteerism actually gets to such proportions that many of the libraries could not even be opened at all if there were no volunteers available. Being from a small town myself, I can appreciate the volunteer spirit of people who live in these towns. I have only just begun to appreciate, however, the whole notion of volunteerism as it applies to rural communities everywhere. And this phenomenon cannot be separated conveniently from rural libraries because there volunteerism is almost a basic necessity. Personally, I wish it were otherwise because volunteers, of course, sometimes find themselves in situations in which they are prevented from doing their volunteer work because of other demands.

CONGRESSMAN BROWN: It seems to me that rural librarians and all librarians play an important role as linking factors. Several of the witnesses have said this and emphasized that the rural library is a link in the resources of the community and because the resources needed in the rural setting are likely to be more widespread, more dispersed geographically, the linkage role may be more important in rural libraries than it is in urban libraries. This may place a greater responsibility on the rural library staff for what you might call a more generalist knowledge, at least of the variety of information resources and how to connect with them, than in any other setting. Would that observation seem reasonable to you?

DR. VAVREK: It would certainly seem to be so—initially an informed librarian would be a key element to make an information service work.

CONGRESSMAN BROWN: All right. I want to thank you very much for your excellent statement, Dr. Vavrek. I am looking forward to reading the submission you have made with regard to the problems of rural librarianship. I frankly

am pleased to know that there is a center concerned with this. I wasn't aware of it.

DR. VAVREK: We are pleased as well, sir: Thank you very much.

CONGRESSMAN BROWN:

I neglected earlier to insert a statement that Senator Larry Pressler wanted to include in the record. And without objection, I am going to include it in the record at the appropriate point.

Because of the exigencies of the action on the House floor this morning, I am going to appoint two chairmen to substitute for me, at least temporarily. They are Mr. Charles Benton, chairman of the NCLIS, and Margaret Warden, who testified earlier this morning. Because they are both members of the National Commission on Libraries and Information Science, they are authorized by law to conduct these hearings. And knowing what experts they are, regardless of what the law says, I have no lack of confidence in turning the chairmanship over to them. We are having a vote on the House floor on the defense authorization bill. And I know none of you would want to have me miss a chance to vote for $180 billion in tax money which will fund an awful lot of libraries. (Laughter.) Mr. Benton and Mrs. Warden, would you come up here please and take over at this point?

MR. BENTON: Congressman Brown, it is an honor and privilege to try and fill your seat up here. Margaret and I have both done this before for the commission. When Congressman Simon was holding a series of oversight hearings on the Library Services and Construction Act, there was a hearing scheduled in Detroit in conjunction with WHCLIST, the White House Conference on Library and Information Services Task Force. At the last minute there was an emergency vote on postal legislation which, of course, is of very great importance for libraries. And it was clearly preferable for Congressman Ford from Michigan and Congressman Simon to stay on the floor and struggle with postal rates than to come to Detroit. We found this out about 3 or 4 days beforehand. One thing led to another, and we wound up as the chairmen for that Detroit congressional hearing. It was an exciting experience. Margaret and I both participated in that hearing along with Bessie B. Moore and Frances Naftalin, two other NCLIS commissioners.

We are very pleased to fill in for the Congressman and the Senator here this morning, and we shall continue with the witness list. I think David de Turk is the next person on the list. Mr. de Turk, we look forward to hearing your testimony, sir.

Statement of David de Turk, Director of Research, National Rural Primary Care Association, Waterville, Maine

The testimony so far this morning has been, as anticipated, from the library side for the most part—and I support that testimony. However, I have tried in my own testimony to take a slightly different perspective because we represent a different constituency, if you will. In my written testimony there is some introductory material, but in the interests of time I am going to skip a number of pages and begin with the meat of my testimony, if that is acceptable to you.

This hearing gave us in the National Rural Primary Care Association an opportunity to begin evaluating the status of communications in rural areas. And in preparing our testimony, we took that opportunity and conducted a survey of a sample of our constituency. I would like to share some of the highlights of that study with you.

First of all, communications in rural health are directed, in the majority of instances, to three areas of need:

1. Patient care, especially patient education,
2. Continuing medical education for health care professionals,
3. Administrative information flow.

The evidence from our survey is clear, with some exceptions, of course, in regard to the availability and use of technology. Communication is carried out in traditional ways: through the print media, by telephone, in face-to-face encounters, and, at best, by use of basic audiovisual technology.

When we asked our sample to indicate specific equipment they have for use—primarily in physicians' health offices and centers, I might add—we discovered the following:

1. About 20 percent own 16mm film projectors, about 15 percent own 35mm slide projectors, 11 percent own 35mm slide/tape units, 10 percent own filmstrip projectors.
2. About 25 percent own cassette tape recorders for audio tape only, and about 12 percent own video recorders.
3. About 5 percent have telephone conference speakers, and another 5 percent have computers with modems.
4. With the exception of two universities, none of the respondents had videodisc players, computer-assisted instructional equipment, or immediate access to satellite TV uplinks or downlinks; and only 10 percent reported access to cable television.

We also asked about respondents experience in any setting with several technologies:

1. About 65 percent had participated in a telephone conference call.
2. About 30 percent had participated in audio or videotape exchange.

3. About 30 percent had obtained information through one-way, non-network television programing.

4. About 5 percent had participated in two-way, interactive television.

5. Less than 1 percent had participated in computer networking or anything of that sort.

When we compare these reports to the state-of-the-art technologies being discussed at this general assembly, it is obvious that rural health communications, at least, are still in a relatively primitive stage of development. Why is this so, and what can and should be done about it?

The usual answer to the first question is, "We don't have enough money to buy the equipment." The usual answer to the second question is, "Provide federal funds." In today's economic and political climate, neither of those answers is likely to move anyone. At the same time, we cannot dismiss those answers out of hand, and we will return to them in a moment. In the meantime, we would like to suggest some other considerations that we believe are relevant to any proposed use of electronic communications in rural areas—culture, education, and leadership.

Without intending to denigrate rural Americans in any way, it can still be noted that rural people tend to be ambivalent about technology, especially when it comes to interpersonal relations. In my state of Maine, the farmer who uses a tractor without hesitation still wants to settle local politics at the town meeting, dispensing with even the ballot box in favor of a show of hands. He wants to know which side of the issue his neighbor supports.

We found a similar ambivalence in our health care providers. It appeared most clearly when we asked our respondents to describe nonlocal meetings they had attended in the past year and to indicate whether or not those meetings could have been conducted by videoconference, telephone conference, or some other electronic means. The question is an important one—I don't have to tell most of you this when you consider the distances frequently involved in attendance at a workshop, seminar or conference, and the consequent costs of attendance.

The results are interesting. Referring to about 80 percent of the meetings evaluated, respondents claimed that electronic communications could not have substituted for the live meeting. The reason given in almost every case was the importance of personal contact outside the scheduled meetings. In other words, the social contact, for personal and professional interaction, was at least as useful as the information content. Furthermore, an analysis of comments and meeting descriptions suggests that, when the social contact variable is eliminated, more than 50 percent of the meetings reported could in fact have been presented electronically without detracting from the information exchange.

None of these results is surprising. Professional isolation is a serious problem in rural areas. A meeting is a culturally acceptable and professionally legitimate opportunity to meet with peers. Nevertheless, from a purely objective point of view, one must ask whether such meetings are efficient and cost-effective if an alternative mode of communication exists and can be used at lower cost.

We use this example to make a point. The introduction of communications technology into rural communities cannot and should not be done without serious study of its potential effects on human behavior and cultural conditions. One only has to look at the introduction of large-scale farming, electrification, the automobile, and television to rural America to see that their impacts have been both constructive and destructive. The communications revolution will be at least as powerful as any of these innovations.

There is a second reason, related to the above, why we believe the use of electronic communications is limited in rural areas at present. Simply put, it is a lack of education about communications. We all think we know how to communicate. We have learned to speak, read, and write. Yet how many of us have really mastered those arts, not to mention the mysteries of symbols, body language, emotions and even extrasensory perception? The fact is, most of us communicate intuitively, and not always carefully.

One example, the computer conference, illustrates how uneducated we are. An article by Jacques Vallee, et al., in the June, 1975 issue of *The Futurist* sums it up.

"Most of our intuitions about face-to-face interaction simply do not apply to this new and unusual form of communication. In computer conferencing, time and distance are dissolved. Visual cues no longer exist. Each person's 'memory' of what has been said is accurate and complete. And everyone may speak at once or listen at leisure. With such features, it is not surprising that computer conferencing might actually establish an altered state of communication in which the realities of face-to-face communication are distorted and entirely new patterns of interaction emerge."

The same could be said, to a greater or lesser degree, about the telephone conference, the videoconference, videotext, and more exotic forms of electronic communications. People who emphasize the social contact in meetings may really be saying that face-to-face communication is more comfortable because they lack training and experience in other modes of communication.

If so, the mere existence of hardware will not automatically increase communications options. People must be educated to electronic communication as they are to reading and writing. In fact, reading comprehension, writing skills, and logical

thinking may be more important in the new modes than in face-to-face verbal communication.

The third reason why electronic communications are not yet widespread in rural areas, particularly in the health field, probably relates to leadership. New ideas are usually introduced to communities by organizations and, in some cases, by influential individuals. Certain kinds of organizations can take risks that individuals cannot take. It is amusing to recall—and I am old enough to do so—that my first experiences with television were in bars, as was my first experience with large-screen television. My neighbors didn't own television sets, but the neighborhood bar did—for obvious commercial reasons.

I certainly do not intend to equate libraries with bars, but we can admit that a tenuous analogy exists. If leadership in electronic communications is to be exerted in rural areas, the public library may indeed be a logical site for a concerted effort. After all, the public library was a leader in preparing Americans to participate in the industrial revolution, so why should it not fulfill the same role in the postindustrial revolution? The library is ubiquitous. We have heard figures on it. The public library is recognized as a neutral source of knowledge. It is accessible to all elements of the community, and it has the capacity or potential to educate as well as passively serve the needs of people.

Our own survey is generally supportive of the library as a central facility for bringing the electronic communications revolution to rural areas. About 50 percent of our respondents are headquartered less than 1 mile from the local public library; another 25 percent are within 5 miles of a library; while the remaining 25 percent, it should be noted, were 15 or more miles from the nearest public library. The majority of our respondents commented on the appropriateness of the library as a communications facility, and many of the comments acknowledged the library's leadership role in a transition period leading to more widespread availability of equipment in other facilities.

The public library is not appropriate in every case, however. Distance remains a factor. Also, cultural and language barriers exist, particularly for Native Americans, Hispanics, and Blacks. Furthermore, the public library may be of little use to migrant workers. We cannot ignore another problem with public libraries either. They are not noted for innovation or aggressiveness. Thus, other facilities should be considered in any program to bring electronic communications to rural America.

I would like to complete this testimony by summarizing our findings, presenting our conclusions, and making several recommendation for consideration by this committee.

Health care programs reporting in our study have a very limited selection of equipment applicable to electronic communications. Our respondents have fairly limited experience with electronic communications, especially in the area of "compunications," the application of the computer to communications. Our respondents have a natural and understandable ambivalence about the substitution of electronic communications for personal interaction. At the same time, they see electronic modalities as very useful in supplementing in-person meetings, for use in following up on meetings, and for reaching people in rural areas in many ways. Responses range from trepidation and scepticism to enthusiasm, with the balance, I am happy to say, weighted more toward enthusiasm. Our respondents tend to favor the use of the public library as a site, except when and where the public library is not accessible to the health-care program as a whole or to certain groups of patients.

We, therefore, conclude the following:

1. Because of distance, low density of population, and scarcity of professional services in rural areas, electronic communications obviously have great potential in rural America.
2. If past history is indicative, there is also potential for dislocation in rural communities if emphasis is placed on hardware to the exclusion of other considerations, especially culture, education, leadership, access, quality or programing, control of communications, privacy, and so on.
3. In the health field specifically, electronic communications can be useful in patient education, in continuing professional education, in some aspects of patient care, in administration, and in combatting the deleterious effects of rural isolation.

Based on our findings and conclusions, we would like to make the following recommendations. I will give you only the recommendations at this point, not the supporting documentation since it is in the written testimony.

1. Federal communications policy should give priority to the communications needs of rural America. Rural America, as I and others have noted, has not always received its fair share.
2. The federal government should encourage and support studies of communications in rural areas. As we have suggested earlier, there are cultural issues that need to be studied before the hardware takes over.
3. The federal government should encourage and support the education and training of those who must make the information society work.
4. In the health field, the federal government should support research and demonstration projects to test the efficacy of new communications techniques in the areas of health education, preventive medicine, primary care, and rehabilitation in rural communities.

The communications revolution is a powerful force. We believe we have only begun to harness that energy in the

health field. We have only begun to explore its impact in rural America. We are cautiously optimistic about the potential of communications technology. We would like to see it developed logically, rationally and soundly; and we are prepared to assist in doing so.

MR. BENTON: Thank you very much, Mr. de Turk, for your testimony. Let me just pick up on one of your four recommendations, namely, the third one on education and training.

The National Institute of Education spends or has been spending a great deal of its money recently on literacy. Today we are confronted by many new media. I just wonder, from your experience, what specific recommendation you would have about the possible role of the federal government in supporting media literacy, if you will, in pursuit of the kind of service you are trying to provide.

MR. de TURK: I think there are two answers to that. We are dealing with two different kinds of things.

One, it is clear to me from my previous studies in communications that using electronic communications to teach literacy is one obvious possibility. A computer is patient, for one thing. A computer can reiterate the lesson as long as it is necessary. I think this area is an important responsibility of the federal government, frankly, because I don't think anyone else is going to do it. I think it needs to at least be started at the federal level.

The other point I would like to make concerns what you call media literacy. We are not yet aware of all the implications of using new technologies. We are beginning to get studies on the effect of television violence, for example, on young people and things like that. But that is just the proverbial tip of the iceberg. These techniques and types of equipment are very powerful in their impact, as Marshall McLluhan pointed out, I suspect, first of all. The responsibility, again, I do not put entirely on the federal level; we can't realistically do that. But I think that is probably where it has to *start* in order to create an awareness throughout the country of what the needs are.

I am very much concerned that we will train people as we have in the past to use the hardware without training them to understand the effects of the hardware, and that we will end up again with audiovisual aids. I do not think the electronic communications revolution consists of audiovisual aids.

MR. BENTON: That is a very important distinction. Thank you so much.

Can we hear from the next two witnesses, Laurel Kubin and Wes Maughan?

I just want to say it is 10 minutes of 12, and we still have four witnesses to hear. We would like to complete this hearing by 12:30 p.m. So if you can compress your testimony, we would be most grateful.

I should say Ms. Kubin is from Colorado State University, and Dr. Maughan is Director of Community Development Programs in University Extension, Utah State University. We look forward to your comments.

Statement of Laurel Kubin,
Colorado State University

MS. KUBIN: It is a pleasure for me to be here to present this testimony regarding the needs of rural consumers for information and education.

While electronic mechanisms have made it possible to transmit scientific/technical information around the world at the touch of a finger, many people in rural areas of America do not have the capabilities to access that information. Elements of time, distance and funds inhibit the accessibility of information.

Rural libraries are limited by funds and therefore cannot even carry some of the standard periodical-type reference works such as the Standard and Poors directory. It is not uncommon for a consumer to walk into a rural library seeking information and still have to wait perhaps 2 weeks for that material. Interlibrary loan, important as it is for accessing materials, is by nature slow. However, as you are aware, people want information when they want it and need it, not 2 weeks later.

We Extension agents who live in the communities and counties where we work have a good understanding of the needs of our clientele for the information and education they desire. Having the backup of specialists at land-grant universities helps us provide information and education in a timely, effective fashion.

However, we ourselves experience some of the same frustrations as our clientele when we cannot quickly obtain answers to questions. This is why I was anxious to become involved in a project that demonstrates how rural libraries, working with local Extension Service offices, community colleges, and public school systems, might use telecommunications to provide more immediate answers to people's informational and educational needs.

A vital first step in establishing the Intermountain Rural Community Information Centers in the four western states of Colorado, Wyoming, Utah, and Montana was to formally assess the information needs of the residents of the eight selected rural communities. It was not surprising to find that the teachers want a way to obtain education for re-certifica-

tion purposes without having to travel to a university 270 miles from home, staying away from their families for 2 to 4 weeks at a time, and incurring extra living expenses. Traveling this distance is not a matter of choice but a necessity. It was not surprising to find that firemen and law enforcement officials need updated training without the expense of either bringing in resource people from at least 100 miles away, or traveling away from home just as teachers have to do.

Nor was it surprising to find owners of small businesses and people in agriculture needing current information to help them make management decisions. Obtaining information on trends and up-to-date economic data is not something many people in rural America take for granted. For, you see, it is not possible to get a current major city daily newspaper in many of our small towns. This small aggravation may make a difference to some people, especially when making financial decisions.

Consider the situation of a rural resident who cannot get a consumer problem resolved. Where does this person turn when there is no Better Business Bureau within 250 miles, no local mass media with a consumer hotline-type service to help resolve problems, and telephone calls mean costly long-distance calls? Without a complete and quick reference system, how does that consumer know where to begin looking for help? Finding answers to these and similar concerns is not impossible, but it is usually costly and not time-efficient for the rural person who needs the assistance.

Another situation in which I have been involved is that of needing information to help community leaders and agency officials plan for impending energy-related growth. Being from western Colorado, deep in the heart of "oil shale country," we recently tried to plan for the human needs resulting from a rapid population influx. Finding information that gave examples of standards created by other boom towns would have been very helpful. For example, how many occupational therapists do we need for X number of population? Well, those kinds of standards for planning just cannot be found. Now we need standards for the "bust-town" rather than "boom-town" syndrome. Our local libraries don't have that kind of information either.

Related to this new population condition is the culture shock that urbanites experience when moving to rural areas. They develop certain expectations of information availability when living in urban areas. When they move to rural areas such as the western slope of Colorado, they know that needed information exists. And yet many rural libraries and other information systems either have no access to that information or else the delivery of it is extremely slow. Like the long-time residents of our western states' rural areas, they quickly learn that it often requires a trip of 1 to 5 hours' length one way to obtain information. As one rural resident said, "It's not having to travel that distance once or twice to get information, but the 300th trip gets aggravating." By developing community learning information centers, we hope to alleviate this aggravation by providing a means whereby a consumer can easily obtain, at minimal cost and with minimal time and energy, the information and education desired.

To summarize, I'd like to point out that the Cooperative Extension Service is a timely and cost-effective delivery system already in existence which helps our people to interpret, evaluate, and apply results of research and other information they need. Through our community resource development programing efforts, we see the need to help rural consumers help themselves by making new and existing information more readily accessible.

Rural consumers need information to make decisions in their homes, business and agricultural endeavors, to meet job requirements, to update their skills, to accomplish tasks, to plan for the future, and to enrich their personal lives. They should not have to receive information by "mail order" as they now frequently have to do. Great distances, time, and money limit them in fulfilling their education and information needs. Anytime a person has to travel 60 miles to the nearest town, 200 miles to the nearest medical center, or 250 miles to the nearest metropolitan center, time and money inefficiencies are a major concern.

The great paradox that exists is that we have an increasing knowledge base available through research and technology, yet the ability to access and disseminate that information has not increased at the same rate. It is through the development of community learning information centers in rural areas that we hope to make this knowledge base more accessible to the rural consumer.

In Meeker, Colorado, we have already had a site provided in our community center-library complex to house the equipment and personnel associated with this project. As people within the community learn of the great possibilities of information and education to be provided therein, the excitement level increases. It is this enthusiastic anticipation of a coordinated, more complete and responsive information delivery system that makes us feel that the community learning center will be a much used and appreciated addition to our rural libraries.
MRS. WARDEN: Thank you very much for your testimony. I would like to ask a couple of questions.

One, you have great problems on postal rates at this present time under the present setup, do you not?

MS. KUBIN: Yes, we do. At least speaking from the Extension Service standpoint. I am sure the libraries do as well.

MRS. WARDEN: Yes, they certainly do. And that is one of the things that keeps coming up. What postal rates are necessary to get material from one point to another? Since

you mentioned you have to get books by mail, that is a very important consideration in your budget.

I think the program that is proposed is quite exciting. And I think with the enthusiasm you have shown, you should be in a good place for a resourceful program.

MS. KUBIN: Thank you.

MRS. WARDEN: All right Dr. Maughan, please.

Statement of Wesley Maughan, Director, Community Development Programs, University Extension, Utah State University

DR. MAUGHAN: I am Wesley T. Maughan, supervisor of community development programs at Utah State University in Logan. During the past 18 years, it has been my opportunity to assist local elected officials, appointed staff, volunteer leaders, and the private sector in assessing their complex socioeconomic and educational problems, and in bringing local, state, and national resources to bear on those problems. The number and kinds of problems confronting local leaders is often overwhelming, especially in communities experiencing boom or bust as they respond to the energy whims of a fickle nation.

During the past decade, 72 percent of the mayors in Utah and 84 percent of the city council members have been newly elected. There is a similar turnover in the other three states of Montana, Colorado, and Wyoming. This constant turnover of elected officials often leaves a void of experienced leadership in city government. This void can be filled only through educational programs designed to meet individual as well as group needs. Even though the League of Cities and Towns, state governments, and institutions of higher learning offer courses for elected officials, they are often not able to attend these training sessions due to travel costs and time demands of their work responsibilities.

In our western communities elected officials and city planners need all types of information to make more effective decisions for the community. Development information dealing with demographics and the economy, as well as information dealing with roads, soils, topography, and wildlife needs to be available for sound decisionmaking. Educational programs delivered to the local library from metropolitan centers via telecommunication systems would alleviate much of this problem while offering high-level training opportunities.

The local library equipped with modern telecommunication equipment could be a valuable resource for elected officials and professional city planners in finding alternative solutions to a variety of problems dealing with planning, human relations, cultural enrichment, economic development, physical environment, and community services. In addition, training programs for firemen, policemen, nurses, and medical doctors could be provided through high-caliber instruction from the metropolitan center. For example, the chief of police in Delta, Utah caught the vision of the exciting potential of the library program when he asked, "You mean I could train my policemen here in Delta without having to use my budget to send them to Salt Lake City to receive similar training?"

On another occasion, farmers and ranchers in Utah, Nevada, New Mexico, and Arizona were saved thousands of dollars through the use of telecommunication equipment. One rancher observed dead sheep on his range. After contacting the land-grant university it was determined that the cause of the death of the sheep was a toxic weed called Halogeten. Ranchers were invited to six university Extension centers to observe a half-hour television program on management of Halogeten. They then had the opportunity to discuss this problem with veterinarians via teleconferencing equipment, thus saving thousands of sheep through proper management of Halogeten on the range.

We anticipate that many innovative programs will be developed with people in rural areas and communities to help solve complex socioeconomic and educational problems that are confronting our citizens on a daily basis.

MS. WARDEN: Thank you.

I would like to ask you a question about your exhibit here at the World Future Society Assembly. Have the people who have been attending gotten the drift of what you're trying to do?

DR. MAUGHAN: It is amazing to me how responsive they have been and how quickly they catch the vision of what we are talking about. In fact, people in the more metropolitan areas—like some of our country cousins back in Boston—are asking us why we don't put it in Boston where it belongs, rather than out in the rural areas. They are catching it very rapidly.

MR. BENTON: Dr. Maughan, in line with your experience as reflected in the exhibit, what role, if any, do you see for the federal government in helping to apply the communication technology for community development?

DR. MAUGHAN: We anticipate that most of the cost of this program would be met by a user fee. However, looking at it realistically, in order to get the program going on a wide basis, it will perhaps take some type of assistance from outside the rural community This might come from foundations, the federal government, or both.

MR. BENTON: Thank you.

MRS. WARDEN: Do you think this program has a place in the Library Services and Construction Act?

DR. MAUGHAN: I am not really acquainted with that act, but I certainly hope it would. Would you care to respond?

MRS. WARDEN: The Library Services and Construction Act is coming up for revision in 1984. It includes considerations of networks and areas in which they can serve. It would seem that there might be a possibility to consider this type of program as well.

MR. BENTON: Thank you. Our next witnesses are Laura Chodos and Barbara Namie.

MRS. WARDEN: Let me first say that if any of you have testimony and would like to submit it, you have 10 days to do so. Now I would like to introduce Laura Chodos. Laura was a delegate to the White House Conference on Library and Information Services. She was subsequently chosen to represent the northeast region on the national steering committee of the group charged with implementing the resolutions of the White House Conference. She was also elected in a joint session of the state legislature to serve as a New York Board of Regents member representing an area of 11 rural counties. She is active in rural affairs associations and international women's networks concerned with health, nutrition, and education.

Statement of Laura Chodos, New York State

I am Laura Chodos from Saratoga County, New York, the location of a famous Revolutionary War battlefield. My home is in Vischer Ferry, a village on the Mohawk River that in earlier times was a flourishing stop for Erie Canal business. Our village is served by a Southern Adirondack Regional Library bookmobile.

Bookmobiles and books by mail services to rural communities were initiated with federal funds from the Library Services and Construction Act (LSCA). If we review the 26-year public record of LSCA hearings, we will find that its importance for rural communities is matched only by the Federal Rural Electrification programs of the 1930's. Both turned the lights on in the homes and minds of rural America, and both aided in the improvement in literacy in America.

The LSCA record holds the names of thousands of Americans who knew what library services meant in a democracy. That record shows, for example, that Bessie Moore, longest serving member of the National Commission on Libraries and Information Science (NCLIS), stayed past midnight in Bismark, North Dakota, listening to a steady stream of men and women "in an outpouring of democratic interest in libraries."

Libraries, beginning in colonial times with the library in Petersborough, New Hampshire in 1803 and the Benjamin Franklin Library Company, were most often the only cultural institution in rural communities, and hold today an unmatched record for contributing to the personal empowerment, privacy, and intellectual refuge for people of all ages. They enabled Americans to become a nation of readers.

I speak to your today as a representative of the White House Conference on Library and Information Services Task Force (WHCLIST), the continuing committee of the first (1979) White House Conference on Library and Information Services, a nationwide town meeting on library needs for all Americans. The 188 elected WHCLIST members (two from each state and trust territory) monitor implementation activities on 64 resolutions adopted at the 1979 White House Conference, report annually on this progress, and promote advocacy procedures to these ends. Enactment of these resolutions will give access to all Americans, including the 51 percent that live in a rural setting, to a wide variety of materials and information sources through the development of multitype library networks and emerging low-cost electronic links.

The WHCLIST committee cooperates with 200,000 members of Friends of Library organizations, library trustee associations, citizen library councils, literacy groups, Cooperative Extension agencies, community-based organizations, government agencies, and all persons interested in libraries to expand *public awareness* of what libraries can do for people and how libraries are changing to meet the diverse information needs of all age groups.

WHCLIST promotes a multitype citizen network that parallels White House Conference goals for multitype, multistate and international library and information networks. Rural communities in America—and rural communities anywhere in the world—have the greatest opportunity of all to benefit from these efforts.

It is reasonable to assume that if we are successful with our efforts to achieve goals stated in the White House Conference Summary Report, a 1989 White House Conference will be able to utilize emerging interactive technologies so that any American can participate at home or in a local library in the development of national information policy and an assessment of library and information needs for the 21st century.

It is also reasonable to assume that the role of citizens and governments at all levels will be to continue to refine the first amendment and public issues of free access, literacy, censorship, confidentiality, intellectual freedom, new government information services, and information needs of special populations—the blind, handicapped, institutionalized, incarcerated or minority language persons, those living on islands and noncontiguous territories, and those who are isolated in any way.

Libraries are our best safety net in a democracy. They must always be able to identify the existence of a document. With 10 new items added each minute to automated catalog systems in the Library of Congress, multitype and multistate library links offer orderly, cost-efficient and convenient access to users. As libraries continue to link with public broadcasting, literacy programs, information programs of other agencies (e.g., Social Security Administration, Departments of Labor and Commerce), adult education, archives, schools and community colleges, and so forth, the local community library will become the one-stop shopping center, as Margaret Warden stated in her testimony this morning, or an electronic mail order catalog center for all family and community information needs. This is what the 1979 White House Conference was about, and what WHCLIST members and all persons interested in libraries have been striving to bring about.

To show you how WHCLIST works, I will be in touch with our WHCLIST acting chairman, Bill Asp, state librarian of Minnesota, to suggest that our 118 members write letters to strengthen the record of this hearing on information needs of rural communities and Senator Robert Dole's hearing on the Florence Protocol in the United States Senate today; and to commend you for inviting 12-year-old Jason Hardman to tell his story on how he started a library in his town of 680 residents in Utah. These activities support important White House Conference resolutions on *public awareness, needs of special populations, youth involvement in library activities, removing barriers to international communications and international cooperation,* and *applications of technology to improve access and resourcesharing in libraries.*

For the purposes of this hearing I collected information on library services and information needs in rural communities from WHCLIST members. Their comments are attached to my testimony (appendix 3). They illustrate that libraries continue to carry out their historic role as the primary information sources in rural communities, that libraries are adding new materials and new services in a variety of formats to serve users' needs, and that community and regional libraries continue to involve citizens (as they have always) in the development of new services and long-range goals for those library services. While many of the programs mentioned in the comments of WHCLIST members were initiated with LSCA funds or matching grants from the National Endowment for the Humanities and other federal programs, these programs continue and expand *only* through funding partnerships that include state and local support.

The great unevenness in per capita funding for library services in the 58 states and trust territories is a serious equity issue that places rural communities in double jeopardy because of the uneven distribution of other economic and cultural resources and inadequate local tax bases in those communities.

Library bookmobile and school bus drivers can attest to the deprivation and poverty in many rural communities. This is a serious national and *global* problem that is compounded by the *invisibility* of rural poverty.

A New York State Senate task force report, *Old Age and Ruralism: A Case of Double Jeopardy* , states that "while representing 31 percent of the nation's elderly population, the rural elderly account for 44 percent of the nation's elderly below the poverty level. The incidence of poverty among rural elderly is almost twice as great as it is among the urban elderly population." Library health information programs, large print and talking books, data transmission on home television screens, friendly visitor reader services, and respite programs can help this group.

Poor rural families are affected by the same complex cluster of problems as the urban family living below the poverty level—lack of adequate health care, nutrition and employment opportunities, excessive school drop-out rates, inadequate job skills and day care for the increasing number of single parent households, and low expectations brought about in part by a lack of information on ways they could improve their lives. Rural families are isolated from the economic mainstream, without transportation to get to roads that lead somewhere.

Rural schools have difficulty supporting the type of education program that is taken for granted in larger school districts. Per-pupil expenditures for curriculum enrichment and transportation strain and limited tax base in a large percentage of rural schools. While resource sharing has always been a tradition in rural communities, it is constrained by a lack of resources to share.

In New York State, 25 percent of elementary school students have limited access to library resources and little or *no* contact with a professional librarian. In addition, many students outgrow resources in the school library. *No single library can serve all the information needs of any user.* School libraries are no exception, even though they have received funding support from federal programs (ESEA entitlements and now, to a lesser degree, federal block grants and consolidation act programs).

The National Commission on Libraries and Information Science included in its long range program in 1975 the need to strengthen school libraries. The commission appointed a task force in 1979 to delineate the role of school library media centers in networking activities. The report stated that "only stronger school library media centers could meet existing standards to function effectively as integral components of a school environment and participate in nationwide resource-sharing networks." The report further stated that "the needs of teachers, students, and others involved in elementary and secondary education frequently are greater than school library programs can meet."

Three years ago the New York State Legislature funded 12 school library pilot projects and two intersystem cooperative networks. This meant, for example, that students and teachers in rural counties around the Rochester area had access, through the Rochester Area Resources Exchange (RARE), to materials in other school libraries, Rochester's public library system, academic libraries, and special libraries such as Xerox and Kodak corporate libraries.

Results from the third year of evaluation of these pilot projects indicate that school library systems have shared more than 37,000 books through interlibrary loan for a potential savings of nearly a quarter of a million dollars that these loan materials represented. School library systems developed specialized collections for use by students, teachers, and adults needing high school level materials, and contributed 369,000 entries to union catalogs.

Legislation passed in 1981 continued small planning grants and established 23 additional competetive grants to expand the number of school library pilot projects.

In a rural north country area of the State, 90 small school districts in 5 counties joined together to form the Champlain-Adirondack Interlibrary Network (CHAIN). A regional advisory committee, working with Stanley Ransom, director of the Clinton-Essex-Franklin Library System, has completed its first six goals—including a computerized listing of local history resources, specialized collections of other cultural institutions, and a listing of volunteers who are experts on local history to work in schools and on school field trips.

The CHAIN advisory committee is now studying possible improvements in its communications and delivery systems and cooperative efforts with the Plattsburgh Public Television Station to include data transmission in a series, *Adirondack Journal,* for viewing in homes, schools, and libraries.

The Sourthern Tier Regional Library System collaborated with the Appalachian Regional Commission and a consortium of schools in a four-county area along the Pennsylvania border to bring televised instruction into all schools. Member libraries distribute pamphlets with directional maps that show local residents how to pick up PBS programs. A report on library services in this rural region of New York State was prepared by Paul Malecki, director of the Southern Tier Regional Library.

The activity of regional cooperative educational centers in establishing the hundred plus translator system which stretches across the southwestern part of the state has had significant cant impact on the thinking for the Federal Communications Commission (FCC) regarding television translators, and has affected the recent ruling establishing low power television stations. Each of the translator systems had requested a waiver from the FCC to enable it not only to receive and repeat a distant public television signal but actually to interrupt that signal to originate local programing over the translator. This local origin capability enables each community to address its particular needs on various issues such as politics, education, conservation, and similar topics.

It seems obvious as public libraries and television stations develop their concepts of service to include nontraditional learning populations that it will be important for rural public libraries and library systems to ensure that public television and radio signals are received in rural communities—or at least at central locations such as libraries. This will allow them to take advantage of data processing and a broad range of cultural and educational programing that will become part of the normal fare of public broadcasting.

The New York State Education Department established this year a Center for Learning Technologies to assist schools with resource management and curriculum and instruction enrichment. The center will offer technical assistance that will truly strengthen local decisionmaking on curriculum materials and programs. A National Science Foundation report, *Teletext and Videotext in the United States* (Data Communications, McGraw-Hill, 1982) lists possible uses of these low-cost and user-friendly technologies in educational programs in schools and libraries.

Legislation such as HR 5583, the Technology Education Act of 1982, by encouraging contributions of computers to schools would support White House Conference goals for school library media centers. An amendment to this bill to extend contributions to public and academic libraries would greatly enhance White House Conference goals for lifelong learning opportunities for all age groups.

WHCLIST will continue to work with all library support groups for the development of national and state legislation that supports public library services, strengthens networks and interlibrary cooperation, and provides funding to encourage the use of new technologies. Public awareness will continue to be our first priority as it was for all White House Conference delegates.

On behalf of WHCLIST, I wish to thank Senator Andrews and Congressman Brown for inviting me to speak today. I would like to thank members of the National Commission and you, Charles Benton and Margaret Warden, for your support of WHCLIST efforts these past 3 years. I thank also Toni Bearman, executive director of the commission, Mary Alice Hedge Reszetar, associate director, and Jane Thomas for their support and assistance to us since our beginnings. I wish to express the gratitude of all members of WHCLIST for excellent materials and information on national library issues from the American Library Association's publication *ALA Washington Newsletter.*

MR. BENTON: Laura, thank you for that inspiring testimony. You have been dishing out lots of thanks, and I think some thanks are due in return. Laura was, as we mentined earlier, one of the thousands of delegates and alternates to the White House Conference on Library and Information Services. And she is a citizen activist par excellence who is keeping the faith in the process because the 1979 White House Conference, as is true of all 60 in our nation's history, was a major citizen needs assessment exercise. We have got to keep on with the identification of those needs and get as many of the White House Conference recommendations put forward as we possibly can. Laura also made a survey, with the help of New York State, of all the follow-up actions on the White House Conference resolutions at the state level.

So for your continued dedication, time, and effort in this process, Laura, we are all enormously grateful.

MS. WARDEN: Our next witness is Barbara Sheldon Namie from Mankato, Minnesota. She is the coordinator of the South Central Minnesota Interlibrary Exchange. She has a fascinating name for it: SMILE. Everybody can remember that one! Under a grant, SMILE sponsored a program to train library personnel on the various categories of information needs of farmers. This network is involved with the delivery systems and experimentation with telecommunications. I am most interested to hear what you have to say, Barbara.

Statement of Barbara Sheldon Namie, Coordinator, South Central Minnesota Interlibrary Exchange

My name is Barbara Sheldon Namie. I am coordinator of SMILE, the South Central Minnesota Interlibrary Exchange, one of seven multitype library systems in Minnesota. Funded through a combination of state and federal Library Services and Construction Act (LSCA) monies, SMILE serves a nine-county area in rural Minnesota. Unlike member libraries, which serve their clientele directly, SMILE involves school, special, public, and academic libraries themselves in an integrated approach to meeting the information needs of residents of our area. The function of the umbrella organization is to link the region with the broader information and library sphere, to develop the potential of the local library units, to identify and share resources, to improve professional competence and to monitor regional library development. The goal is for the individual library to remain a relevant, viable and independent member of a larger interdependent universe. Multitypes such as SMILE enable library and information service providers to do their jobs better by delivering the needed information to the farmer, aging citizen, student, business executive, consumer, artist or elected official.

The present SMILE organization has, over the last 8 years, evolved from a voluntary and unfunded coalition of librarians who shared a common recognition of interdependence on the part of fiercely independent agencies. Membership includes 37 school districts; all of the county and city public libraries and regional public library systems; seven public and private college and university libraries; and a diverse "special" category which includes the regional development commission (similar to a council of governments), the regional education cooperative service unit (which provides services and programs for 45 school districts and six private schools in the nine-county region), professional associations, hospitals, county law libraries, and historical societies. The nine-county area served by SMILE covers 5,064 square miles, with the majority of the resources located in three or four communities—many geographically and psychologically remote from a large proportion of area residents.

I speak here from my experience as SMILE coordinator, as a former library trustee appointed to both my local and regional public library system boards, and as a native of Clinton Corners, New York, who grew up on a farm in upstate New York and migrated 17 years ago to Minnesota.

As a rural resident I have indeed witnessed the changing information needs of rural Americans. Information is a vital resource for my family, my neighbors and the institutions and agencies that serve us. Dissemination of information to my community is a basic ingredient in assuring the quality of life that we continue to enjoy. The technological capacity to increase access to information promises us unparalleled opportunity to remain rural residents while participating fully in the economic, educational, political, and cultural mainstream of this country.

Farmers in my community manage their businesses with microcomputers that keep the books and electronic data base systems that provide the link between them and the Chicago futures and commodities markets. Doctors, teachers, and lawyers electronically access and retrieve the most current literature in their fields. The cultural life of metropolitan areas is beamed to us by satellite or delivered on videodiscs or videocassettes. Government officials, bankers, and business executives depend on accurate, current information on demographics, market trends, and legislative and executive policy which is available through the library.

Multitype systems such as SMILE respond to today's challenge to assure equity of access, appropriate technology, and coordination of wholly new information delivery systems.

Until very recently library networks, which I term "first generation networks," have been mammoth electronic systems, linking through computers and telecommunications the recorded resources of the world. In Minnesota, many librarians have access to MINITEX, the Minnesota Information and Telecommunications Exchange, an online, multistate service that retrieves needed materials for users. Many academic and public libraries use the Ohio-based OCLC system for

cataloging, locating, and retrieving library materials. In addition, Minnesota's state university system has the collections of its seven state university libraries online.

We are seeing that, as information needs of rural Americans expand and evolve, the library and multitype library systems play a clearly identifiable role. On the one hand, libraries are proving to be the most cost-effective means of delivering information resources and services to rural Americans and to the agencies and institutions that serve them. On the other hand, libraries and multitype library systems have a significant but largely unexploited potential to identify and interpret the information needs of rural Americans. This latter role will ensure the design of appropriate technologies for systems based on locally defined and documented needs.

In order to understand the role that libraries and multitype library systems can and should play, it is important to look first at the structure of the complex library network that presently exists. No library today functions in isolation. In fact, the library is no longer a building or a room, but an interdependent system that provides the link between information and users. Technology is neither a luxury nor a tool limited to the large, the elite, or the urban. Technology has become intrinsic to the library's functioning. For a decade, computer technology has been enhancing access to information. Now telecommunications technology and ready access to computers, coupled with emerging library administrative structures, can erase the inequities previously imposed by geography, lack of computer sophistication, and the absence of rural libraries from the information mainstream.

More important, we must look at the library as it exists in the rural environment and at the role that the local library plays as the main point of access for rural residents to the information mainstream. The local library delivers resources to the rural resident on his or her own turf—perhaps in his or her own living room, office, or tractor. It is an institution indigenous to the rural community. The local library remains a part of the rural community, a nonthreatening agency designed by rural residents. Even with a large influx of state and federal funds, the local library continues to be funded and thus controlled by local taxpayers.

The staff members of these local libraries are unique human resources. The local librarian is both a traditionalist and a problem solver, skilled in selecting materials and in matching user needs with appropriate resources. Within the community the librarian enjoys a high degree of trust, based on knowledge of the community and awareness of resources locally, regionally, and nationally; and has a professional reputation for confidentiality. The librarian is imbued with an attitude of service and a firm conviction that there are solutions to personal, business, and community problems, and a recognition of the role that information plays in that process.

Further, librarians are adamant proponents of the individual's right of access to whatever resources are necessary to be assured of informed decisionmaking. Librarians are legendary defenders of bootstrap theories, individual rights and responsibilities, the triumph of the human spirit, and the importance of knowledge in coping, relating, and solving human problems. The librarian is an educator who selects appropriate resources and technologies, retrieves information, and most important, links people with resources, both human and recorded.

Within the local community the library is also a place—a focal point—where activities, materials, and people come together. In many small communities served by SMILE the library is the only public building other than the post office. In a small school the library is often the place where students and teachers come together for creative, unstructured, multidisciplinary activities.

Largely with LSCA assistance, the rural library has extended its service to reach new populations. In 1957, when LSCA funding was made available, one out of every six Minnesotans did not have access to public library service. Today only one of every 36 Minnesotans does not enjoy such access.

LSCA funds were the primary source used to initiate bookmobile and books-by-mail service, so that over the past 25 years library service has become available to a large number of previously unserved rural residents. Prior to LSCA funding, city libraries offered books and periodicals to residents. Today diverse resources such as records, films, audio and video cassetes, videodiscs, and data base searches are accessible to many, but unfortunately not all, rural residents in Minnesota. Recently LSCA Title I funds were used to install computer terminals and communication storage devices for interlibrary loan communication between local libraries and to enhance the capability of local libraries to search distant data bases, sometimes in another state. Of the 26 installations in Minnesota, 16 are within rural community libraries.

It is an anomaly that the rural library, in spite of this history and potential, is threatened. Local libraries are struggling for fiscal support and survival. New federalism places unprecedented pressures on the local tax base. Increased postal and telecommunications costs threaten delivery systems. Energy costs hit rural libraries with devastating force.

An even greater threat comes from the technology itself. This technology could perhaps serve to isolate and thus destroy the rural library. Production of vast quantities of information and sophisticated telecommunications systems has the capacity to dwarf the local library, ignoring the fact that the small rural library has a unique and critical role to play. The local library continues to provide the most meaningful access point, the human interface, which is the vital link in the communications process. The mystique of the machine and the complexi-

ty of information delivery structures must be adapted to—not alter—the traditional library staff and the local governing board. New telecommunications systems must involve significant participation of representatives of rural libraries who are familiar with the real needs of the communities they serve and with appropriate means of accessing and delivering information.

Rapidly expanding technology and the indispensability of information to every sector, urban and rural, creates the double-edged sword with which the rural library must struggle—with minimal tools and too often in isolation.

SMILE represents what I like to call a second generation network, based not only on technology but on human interaction. It is the type of network envisioned in the resolutions of the 1979 White House Conference on Library and Information Services report. Networks such as SMILE play a new role as gatekeepers between the libraries of the region and the universe of information that has become available and indispensable to the American public and to public and private institution systems. Multitype library systems such as SMILE can play a further role in assessing the information needs of the libraries we represent and of the citizens served by those libraries, so that the technology patterns that emerge address real rather than perceived needs of rural Americans.

Second generation networks such as SMILE are now emerging as formally recognized entities which employ computer and communications technology to forge wholly new patterns of accessing human and recorded resources. The combination of technology and these new library structures dramatically enhances the capacity of local libraries to identify information needs and thus to provide timely access to information resources and services for rural residents. The primary purpose of second generation systems is to ensure both the adequacy of resources and the appropriate delivery of resources to the widest spectrum of people served by participant libraries and related institutions. At the same time, regional multitype systems foster local cooperation among all types of libraries and between libraries and other community agencies. *Libraries thus operate as a range of functions rather than as buildings or collections.* The parts of the network are integrated through various means, including association of library staffs; formal agreements for resource sharing; common data bases; and, most important in the rural environment, telecommunications systems.

SMILE has historically had a commitment to the extension of rural library service. The first SMILE project was a major participation in Farmfest 1976, a project funded by LSCA. SMILE purchased a significant collection of farm-related materials which were displayed at Farmfest 1976 and then were rotated to libraries within the SMILE service area. Bibliographies of the materials were also distributed nationally by SMILE. In 1979 the SMILE organization received national recognition for a library public relations program aimed at rural users' needs for information and the role of the library in meeting those needs.

The SMILE multitype system serves more than 120 public, academic, school, and special libraries in nine rural counties. All libraries and information centers participating in SMILE enjoy direct access to the interlibrary loan and regional reference service established by the region's public library system. SMILE contracts with the public library system to bring interlibrary loan and delivery service to all participants. The regional library courier delivers (by truck) over 6,500 books and envelopes per week, making 36 stops each day on 5 different 230-mile routes through the region. The rural resident has the needed resources of the region, state, and often the nation at his or her fingertips within a few days of the request. By using an existing system, SMILE has expanded access and formally linked libraries in a program of cooperative resource sharing that benefits its rural population as no other could. Each local library can now fill requests located beyond the walls of the library.

Recently the area agency on aging together with the nine-county regional development (and planning) commission determined a need for an information and referral service to the senior citizens of the area. It was immediately clear to the regional development commission that SMILE's organization and network could be used to fill this need. In 1981, the area agency on aging awarded SMILE $20,000 to establish an information and referral service using a 24-hour hotline, the existing interlibrary loan and reference service, and the expertise of the area's librarians as information providers. Thus, area seniors and librarians are but a toll-free phone call away from needed information. Again, librarians are working together to provide needed information to rural citizens.

SMILE provides a professional forum and exchange of information through a monthly newsletter, as well as through state-of-the-art discussion group, which draw librarians together from all types and sizes of libraries within the region. The expertise of each is welcomed in sharing the work of the multitype. In SMILE, technological advances are welcomed and manageable in large part because of the support and spirit of comaraderie evident among the regional community of people who make our libraries vital, integrated parts of a large whole.

To a large extent the resources to ensure quality information services for rural Americans are available. They can, indeed, be indentified and delivered. The need remains to couple the strength of the local library with the unique capacity of multitype systems. The result will be threefold. First, the library community as a whole will become aware of and responsive to the specific needs of rural Americans—needs for consumer information, for business management information, and for agricultural information. Second, providers of service

to rural residents such as federal, state, and local governments; consumer organizations; and information and referral services will take into account the potential of the local library to deliver information to citizens regardless of locale, age, or ability to pay. The SMILINE project which I described is one concrete example of this possibility. Third, decisionmakers involved with determining appropriate technology and information service policies will base their decisions on information provided by multitype system leaders who are uniquely aware of the essential needs of rural Americans.

For the multitype library system to achieve its inherent potential, those who are responsible for comprehensive library and technology legislation and policy must see the library in a new light. First, we all must shed the image of the library as strictly a place. The place that is the local library is but the access point to inexhaustible and universally available resources, transmitted through electronic media and accessible through existing and emerging telecommunications systems.

Further, the business of the library must be seen as extending far beyond traditional perceptions of leisure reading, how-to-do-it information, and story hours. Important as these services are, the library has assumed greatly increased responsibilities, necessitated by American society's universal dependence on ready access to information. While books and periodicals continue to be the basic goods of the library, the commitment of the library to meeting user needs demands the inclusion of all types of materials in whatever format—online catalogs, videotex, dial access data bases—transmitted by cable, by satellite, by telephone, fiber optics, or even the prosaic delivery van. Recognition of the essential role that the library can play in the delivery of information to its citizens could, in fact, result in major cost savings to the government itself, by developing the capacity of the library as an institution to serve as the point of access to the wealth of information services, products and services delivered by the government to its citizens.

Decisionmakers must also recognize and then exploit the potential of the library to play a role in shaping the communications profile for rural America. Because they are linked through regional, state, national and international networks, libraries have experience with the complex interrelationships required for massive systems to operate. The everyday business of the local library demands that it be tied into the broader spectrum, but the survival of the library depends at the same time on the extent to which that library addresses its unique local constituency. This experience, with delicate balance between network interdependence and local accountability, offers an appropriate model for any interdependent communications system.

Last, the recognition and support of systems such as SMILE must remain the concern of agencies which transcend the local region. The costs of multitype systems are low; the benefits of cost-effectiveness, coordination, and comprehensive planning are longterm and often elusive. No one community will—or should—take upon itself the burden of complete support for cooperative integrated systems. Local boards cannot be expected to see immediately the long-term gains, nor do they have the power to determine state, national, and international decisions about technology.

Local staff and governing boards must recognize, however, that the survival of the individuals and institutions served by these libraries is dependent upon equity of access to information. Further, they must acknowledge that the survival of the rural library, whether public, school, special, or academic, depends on the interdependence of institutions, both public and private, in the delivery of information services. Last, those who determine policy at the federal level must be alert to the impact that their decisions concerning funding priorities, technology, and telecommunications policy have on rural Americans. We welcome the opportunity to work with you in identifying and documenting information needs and in devising creative, responsible, and cost-effective strategies for assuring equitable access to information products and services for all Americans.

MR. BENTON: Let me say, Barbara, that is a most impressive case history of multitype library cooperation on the part of our states. Its implications for rural library information services are really very exciting. I just wonder if you could tell us for the record the degree to which LSCA funding and LSCA in general have been a part of the creation of this model. I suspect that there is a relationship between SMILE and LSCA, and I wonder what this has meant to you and what implications this has for the future.

MS. NAMIE: I am going to speak about the SMILE multitype and would like you at the same time to understand that there are six other regional multitypes in Minnesota. SMILE is operating right now on a budget of $35,000 per year. Seventeen thousand of these dollars are from LSCA.

MR. BENTON: Patricia Klinck, I believe, is not here. She is the last witness.

We have her testimony, so the record should be held open for it and for any others who wish to submit testimony. Three-hundred and forty people came to this joint congressional hearing throughout the course of the morning. So it has been quite a turnout, and we congratulate those who stayed right to the end.

Additional statements may be sent to the National Commission on Libraries and Information Science, 1717 K Street, N.W., Suite 601, Washington, D.C. 20036.

MRS. WARDEN: I would like to add something about Patricia Klinck. She is state librarian in the Vermont Depart-

ment of Libraries in Montpelier, Vermont. She is also chairperson of COSLA, the Chief Officers of State Library Agencies. Ms. Klinck serves as state librarian for the most rural State in the country, with 66 percent of its population living in towns of under 1,500 people. She has worked in libraries ranging from bookmobiles to computerized facilities.

Ms. Klinck's plane didn't get off the ground. And when a plane doesn't get off the ground for one reason or another, you stay where you are.

MR. BENTON: Thank you all. And thanks to the World Future Society.

This hearing is at an end.

Whereupon, at 1:00 p.m., the hearing was adjourned.

WRITTEN TESTIMONY

SENATOR LARRY PRESSLER'S Testimony Before the Joint Congressional Hearing On Rural Information Needs

I am very pleased to participate in this morning's hearing, and I want to commend Senator Andrews, Congressman Brown and the National Commission on Libraries and Information Science for sponsoring this morning's discussions. The subject of rural information and communications systems is of great public importance and of particular personal interest to me.

I grew up on a family farm outside of Humboldt, South Dakota. Humboldt is a town of 430 people. We still don't have cable television, and when I was a boy, we didn't have a permanent library. Our information sources were primarily regular broadcasting services, like radio, newspapers, magazines, and the bookmobile. I remember looking forward to visiting the bookmobile, which stopped every couple of weeks at the Catholic parish school and the local public elementary school. The bookmobile gave me a chance to learn about people and places totally different from my own background. I have always been grateful for those opportunities. People who live in rural areas are more isolated and have fewer information sources than Americans living in cities and suburbs. As a member of the Senate Communications Subcommittee, I remember my own childhood on a farm, and I am committed to ensuring that rural Americans are not left out of the rapidly growing communications revolution.

In the last 10 years, we have witnessed an amazing increase in communication technologies, such as two-way cable systems, which bring information into the home. We can foresee the development in the near future of new technologies, such as direct broadcast satellites and low-power television. These information sources must be made available to all Americans, including our rural citizens.

One brief example illustrates the importance of Congressional attention to the special needs of rural Americans. Cable television originally started in rural areas which were geographically isolated. The community cable antenna picked up distant broadcast signals and re-transmitted them so that farmers and ranchers could get better television reception. With the growth of satellite technology and the reduction of regulatory restraints, cable television has now become an urban entertainment medium. Cable companies now have little economic incentive to build systems in rural areas. Again and again we see that technology provided in cities and suburbs is not readily available in rural communities. States like my home state of South Dakota must turn to other information sources which are better suited to rural areas. A rural information source might be the local telephone cooperative which has obtained a Federal Communications Commission waiver to provide cable programing. Or another source might be an earth station in the backyard or, in the near future, direct broadcast satellite technology. The important point to remember is that Congress must encourage, and not obstruct, the invention and development of a large variety of information technologies. With this variety, rural Americans have a much better chance of participating in the communications revolution.

An information explosion has overwhelmed this country in the last several decades. This phenomenon is caused primarily by the rapid increase in technologies to communicate information, whether through the air by satellite, or over a wire by cable. Rural Americans must participate in this process. Forums such as this morning's hearing are excellent opportunities to explore the special needs of rural citizens and identify those technologies which are best suited to those needs. A farmer who wants the latest information about the commodities market, a senior citizen who lives miles away from his doctor, a small high school in a farming community with few onsite educational resources—all of these situations are unique to the rural environment. Congress has an obligation to keep these needs in mind as communications policy is established. As a Senator from a rural state and a member of the Communications Subcommitte, I remain committed to that task.

Again, I want to thank the cochairmen of this hearing for giving me an opportunity to share some of my thoughts on this very important issue. I'm confident that the exchange of information and ideas this morning will be very useful and beneficial.

Statement of PATRICIA E. KLINCK, Vermont State Librarian and Chairperson of the Chief Officers of State Library Agencies, Submitted to the Joint Congressional Hearing "The Changing Information Needs of Rural America: The Roles of Libraries and Information Technology"

My name is Patricia Klinck. I am the state librarian of Vermont and chairperson of the Chief Officers of State Library

Agencies, a nationwide organization made up of the people responsible for statewide library development in the 50 states. One of the reasons I am testifying is that according to the 1980 census, I represent statewide library services in the most rural of these 50 states. Although I am most familiar with providing information to citizens of Vermont, our problems and needs are not unique, in spite of our unique regional differences and political structures. All of the rural states have large geographic areas, widely scattered populations (sometimes isolated), sparse human and material resources, and an inadequate local tax base from which to draw. These factors make it difficult, but not impossible, to bring rural library services into the technological age and then to maintain and keep pace with changing technology. Vermont presents no exceptions to the problems involved. Its 500,000 people are scattered in 242 towns over 9,609 square miles with two-thirds of them living in towns of less than 1,600 people.

To complicate matters even further, Vermont had a per capita personal income of only $8,654 in 1981, well below the national average of $10,517 and the New England average of $11,514.

Although the majority of residents in rural areas do not, for the most part, have access to a wide variety of cultural, educational, and economic resources, they cannot be stereotyped. Even though some Vermonters admit to never having seen a streetlight or been on an elevator, one cannot call them poor or backward. Rural America, at least Vermont, has the same diversity of informational needs as urban or suburban areas throughout the country. What is different is the absence of public facilities and services, and more important, the absence of a concentrated local tax base to provide local services beyond the bare essentials. Vermont, for example, has a town government structure which provides for 220 public libraries with an average local tax support of only $3.59 per capita. More than 40 towns have no library at all.

Despite imagination, creativity, and careful budgeting, the rural tax base, when related to the cost of hardware, telecommunication rates, et cetera, makes it difficult for the great majority of small towns with library budgets often under $1,000 to advance rapidly into the technological age at all. For example, almost 50 percent of Vermont's libraries do not have telephones. This figure can be duplicated in rural areas from coast to coast. Even worse, many untrained librarians actually claim the telephone is a general nuisance and completely unnecessary to provide library service. This brings me to a further complication. Rural areas, because of salaries, or lack of them, do not attract trained library personnel to develop creative services to meet the needs of the patrons.

Again, to use Vermont as a typical example, there are only 20 librarians with master of library science degrees in 220 public libraries. This briefly illustrates the present condition and the problems of providing adequate rural library services to Vermonters. When people are used to inadequate services all their lives, their level of expectation never rises and the chain of poor service continues.

In spite of present conditions, the need for rapid and complete access to information is as important to rural populations as to all other populations. For us the major challenge is how to meet the information needs of isolated rural Americans in a rapidly changing technological society on an ongoing basis.

For 25 years, federal library funding under the Library Services and Construction Act (LSCA) has accomplished a great deal in helping to provide resources, materials, and trained staff to rural areas. In Alabama and South Carolina, LSCA has provided for the planning and development of professionally staffed county library systems. In Tennessee, deposits of books are sent regularly to isolated areas, and are housed in post offices, general stores, and homes. Several states—Minnesota and Nebraska, for example—stimulated multitype cooperation and the sharing of sparse material resources by using federal funds provided under the LSCA to provide the stimulus for terminals, training, and telecommunications costs for library systems and public libraries. LSCA has allowed Vermont to provide the individual and the smallest public library with free access to national bibliographic data bases and to the resources in all Vermont libraries through a union catalog. As a single source of funding, LSCA has provided the initial stimulus, but cannot, with no major planned increases, be expected to meet the ongoing technological needs of all libraries (large and small).

This brings up a philosophical question. Does the library, small as well as large, as an institution have a role in providing information to citizens in the new technological revolution? Yes, but in the rural areas the format will have to change. Looking to the future, it becomes more and more apparent that any new system will have to be developed to meet human needs, not to meet the specifications of existing systems.

One thing we librarians must keep in mind is that technology is only a means of providing access to information. Although automation services will be expensive, I hope that decreasing costs and size of hardware may make service more accessible and easier to keep up to date for information retrieval.

However, while the cost of hardware may decrease, when I look at my postal costs, which have doubled in 2 years, or line charges for the teletype and terminal, it becomes more apparent that the costs of electricity, telecommunications, and other utilities necessary for transmittal of information are going nowhere but up and up.

Inexpensive information is going the same way as cheap energy. When the maintenance costs of technology are coupled with

wide geographic distances to be served, costs become prohibitive for the small library and its taxpaying users.

This is not to say, however, that rural areas should not begin to take advantage of technology. It does mean that rural areas will need to carefully explore methods, and discriminate in their choices to ensure that new methods are applicable to rural situations. With technology it should be possible to bring information and rural users together more quickly and efficiently even at somewhat higher costs.

To ensure that costs to the user do not preclude access, Congress should seriously explore the possibility of giving the private sector incentives to make hardware, software, and telecommunications available inexpensively to public libraries. I learned recently that legislation has been proposed to give computer firms incentives to donate hardware to schools. I would hope this would be extended to public libraries as well. However, rural libraries may need to replace traditional telecommunication methods with more satellite communication to make services cost-effective over widespread isolated areas. So, again, I urge the study of new rate structures to ensure that this alternative can be a viable one in rural America.

With all its benefits, ease of access also brings concerns, especially to rural America where local control and the rights of individuals are held dear. First is the individual's right to privacy. Will policies advocating access to information come in conflict with individual rights? Difficult political and social problems will need to be addressed. The use of mailing lists to send catalogs flooding our doorstep is just the beginning. The year 1984 is approaching and we must remember that technological provision of information with all of its positive applications also has the potential for negative political control, which we must be careful to guard against. Some time ago I read that in the future the difference between the "have" and "have not" areas of the world, the developed and undeveloped, which up to now have depended on the economic and productive wealth of a nation, will depend greatly on who has the best qualitative and quantitative access to information. Will our own rural areas become "have nots?"

Second, as technology increases, so do my concerns about the ability of our citizens to read. Literacy and "back to basics" are important issues today; yet we continue to see a great decline in reading and writing skills. We now have pocket calculators that do mathematical equations or language translations. Our children play computer games in kindergarten. Are we coming full circle to a new elitist society in which the few will read and reason (the image of the Renaissance man, perhaps) while the rest of humanity will be doomed to push buttons to gather food, fuel, and information? Who then will advance technology?

The challenges of the late 80's and 90's will continue to include funding and the information explosion. In my mind the library is the institution that can use technology but can resist and hopefully prevent an information inbalance or overload. I admit that the library was instituted in a simpler time, but its basic role—*ensuring that information is available to all*—has not changed. In fact, in this day of bigger is better it may be the small rural library properly located in an isolated population cluster that will come full circle and be the way to the future, with changes in delivery methods, of course. Still, it should be only the methods and the formats that change. We must channel the capability of technology to provide the proper incentives, legislation, and funding to ensure that individuals no matter where, rich or poor, have the same right and access to information resources *wherever the resources are located.* This is the challenge of the next decade. In a world where pendulums swing to extremes, the library must work to maintain balance—between efficiency and service, balance between machine and the human—to ensure that people have both the right to read and savor and the right to quickly access current information.

Testimony of DANIEL H. CARTER
Manager of Advanced Business Planning
Information Products
Texas Instruments, Incorporated
Houston, Texas
Submitted to the
Joint Congressional Hearing
on "The Changing Information Needs of Rural America: The Roles of Libraries and Information Technology"

The plight of rural America can most likely be recognized when one views some recent newspaper accounts of statistics released by the United States Department of Agriculture citing the growing crisis facing the small farmer. Of this nation's 2.44 million farms in 1981 only 1 percent are showing net income improvement over 1980 performances. Farm income overall is forecasted for 1982 to be about $19 billion, down 24.3 percent from 1981 net incomes of $25.1 billion. The most significant aspects of the figures reported relate to the statistics showing that the previously successful middle-sized farms are beginning to show reduced net incomes. For instance, until 1980, farms with marketings of $10,000 to $40,000 a year were in the black. But now even the farms in the $40,000 to $100,000, the $100,000 to $200,000 and the $200,000 to $500,000 sales categories are showing declining net incomes. The farm net income trends, ominous as they are, should not be viewed out of context of the general economic condition of the United States. However, when one realizes that the American agriculture community has been previously recognized as a world leader whose productivity has set the pace for American industry, it is a sobering experience to consider what is happening and what the future holds for the small and middle-sized farmer.

The impact of these conditions on rural America is obvious, and only serves to accelerate the already recognized disparity

existing between urban and rural modes of life. Not that urban living should be considered the ultimate, but rural quality of life standards are obviously in a state of deterioration that must be repaired. Since agriculture and agriculture-related businesses are by far the largest producers of income in the rural community, it is obvious that these are the areas one should first examine to determine how, if at all, computer-based information and service systems or enhanced library services can provide some much needed assistance.

Before proceeding further, it is my perception that this testimony will be most effective if I indicate now what I expect to develop, so that as we proceed you can recognize how all the bits and pieces to be addressed fit into this solution for the "rural dilemma." Without undue elaboration at this point, it is suggested that a "Community Information and Service System" can be a very positive force in rural America and can lead to a significant quality of life enhancement in that community. It is further offered that this testimony will not likely contradict any of the many hours or pages of previous and yet-to-come testimony on this subject; rather, it is suggested that it is a logical next step toward a resolution of many of the cited issues and the development of a comprehensive, albeit idealistic, plan toward "Rural Renewal." As this testimony develops, it will become obvious that what is being presented here represents only an outline of the issues and subjects that must later be dealt with in greater depth. Nonetheless, it will, I believe, allow one to recognize that the tactics being outlined here are unique and very likely can be the basis of a strategy that can make the achievement of our objectives possible.

In developing this particular testimony, I've incorporated some references to comments earlier offered to Representative George E. Brown, Jr.; Mr. Robert Lee Chartrand, Congressional Research Service; Mr. Gerry Sophar, Administrator, Federal/Local Community Information Programs, NCLIS (formerly Executive Officer of the National Agricultural Library); Mr. Paul Zurkowski, president of the Information Industry Association; Mr. Charles Benton, past chairman of NCLIS; and others. What follows is an outline of points, questions, and answers that must be developed and understood.

What Are The Specific Needs of The Farmer?

- **Operations and Production Management:** Process controls -Experiment/data analysis - Recordkeeping/statistics - Staff and labor management - Marketing/merchandising control -Access to technical programs - Security systems

- **Financial Management:** Standard accounting systems -Resource planning - Tax record management - Profit and loss programs - Financial services access - "What-if" models/analysis

- **Community Interaction:** Access to services - Access to information - Instant news and communication - Activity participation - Community business interaction - Marketing -Buy/sell - Association participation - Labor market services -Local, state, federal government connections

- **Personal and Family Concerns:** Education/training/job services - Health/nutrition/homemaking - Social interaction -Entertainment/games/music - Home security - Information access and exchange - Family and home logistics support

The Technologies, Devices, and Processes That Are Available Or Needed To Address These Needs Are:

- **Accessing Devices:** Textual-based terminals - Pictorial- and graphics-based terminals - Voice-based interactive computer systems - All the above in one terminal - Personal computers -Minicomputers - Home computers

- **Local Processing Devices:** Smart terminals - Intelligent terminals - Personal computers - Minicomputers - Small business systems - Programmable calculators - Extensive electronic storage - Process control systems

- **Remote Processing Devices/Services:** Mainframe hosts -Community-based computer systems - Cooperative-based computer systems - Private vendor/service systems - Extension Service systems - Education services systems - Information services - Government services - Current awareness services - Security system services

- **Network/Communication Services, One-way, Two-way:** Telephone links - Cable links - Wideband/baseband - RF links - FM/AM/microwave/etc. - Satellite links - Value added networks - Two-way TV and SSTV

Some Of The Major Forces And Trends Influencing The Solutions To The Needs Are:

Process control and automation - Computer-based services - Electronic technology advances - Economy of scale - Productivity squeeze - Inflation and profit trends - Urbanization - Absentee farming - Home business

Some Of The Issues To Be Resolved If The Solution Is To Be Realized Are:

Total system solutions - System management and maintenance - Diffusion rates/critical mass - Protocol and connectivity - Software compatibility - Private sector support - Joint public/private sector efforts - Productivity improvement - Survival of rural communities

The Government/Public Agencies Must Take A Leadership Role In Encouraging The Private Sector To Develop Programs And Services Designed Specifically To Respond To The Wants/Needs Of The Agricultural And Rural Communities. More Specifically, They Should:

Sponsor broad-scope workshops involving public and private sectors: Establish wants/needs - Examine alternatives -Organize action teams - Set specific "go-dos" and dates!

Initiate pilot programs/tests: Community Information and Service Systems - Agribusiness "local" systems services -Agribusiness "remote" systems services - Agrirural community development - Productivity analysis systems - Enhanced library services

Increase availability of public information: Offer at "true" cost to private sector - Convert rural/agricultural information to electronic accessibility - Move it to local library outlets -Assist small business information ventures

Develop national level imperatives: Agriculture well-being is crucial - Rural versus urban servcies equality - Rural versus urban quality of life - Agribusiness productivity - Rural community balance-of-trade issues - "Rural renewal" programs -Enhanced library services - Rural-to-urban migration - Private sector development

Other: Service standardization - Creditability and critical mass implications - legislative and legal support - Encourage international cooperation

To respond to the listed needs, trends, forces, and issues, it is suggested that a "Community Information and Service System" be examined as an alternative to other ongoing relatively unsuccessful programs. It is intended that the word "Community" be most significant in that it highlights the major difference in this alternative to many of the others. The majority of existing one-and two-way electronic information services are organized on a national basis and in general are individually narrow in scope. Thus, in order for one to obtain specific information in a broad cross section of interests, much time, access experience, and many connections are required. Most significantly, too, the likelihood of acquiring information of a local "perishable" or "volatile" nature is from little to none.

The evolution of existing online and electronic information services has been very orderly and forecastable. These service organizations, for the most part, earlier provided print-based information services and have more recently migrated toward electronic distribution media. Where their particular interests or information resources were narrow, very often an information broker stepped into the picture offering these same narrow primary services in connection with several other similarily narrow but related data or information services. These information services, of which approximately 300 are computer-electronic distribution based, depend on large national and international markets to provide the revenues necessary to support their highly specialized and narrow information offerings.

What is being discussed here is an alternate solution based on a broad information service offered on a community-by-community basis, as opposed to those presently available on a national basis. It is obvious that for such a utility to be successful, it must offer a very wide list of information services, many of which are not available in any form today.

I've purposely kept the interests of the farm enterprise, the farm family and agribusiness in direct focus to develop the community information services system concept in a logical manner. It should become obvious, however, that as services are developed in response to the farm enterprise needs, many of those same services will respond to the wants of other businesses, enterprises, agencies, and homes, It makes sense to provide new information and service facilities designed and implemented to serve the local needs of the community. After all, where do you work; buy and sell; go to school; raise your family; spend your money; enjoy social and other activities; use the library; visit the doctor, lawyer, and dentist; go to church; develop lifelong relationships, and spend 90 to 99 percent of your time? It's where you live; it's your community! It is with these ultimate developments in the back of my mind that I can forecast the virtually sure-fire success of this strategy in generating the "rural renewal" we're interested in achieving.

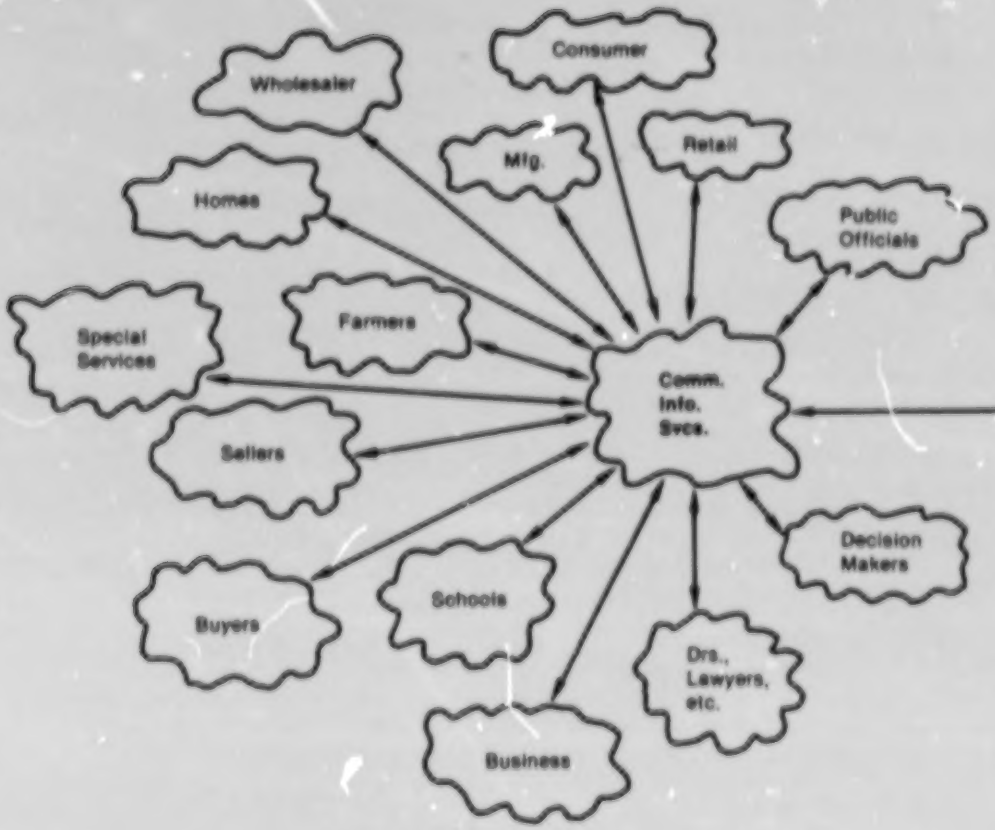
The implementation of these new service concepts will require close cooperative efforts between the public and private sectors, an operation not always easily arranged. Private businesses will need to examine their charters and existing business relationships to determine how and to what extent they should join these efforts. It is a certainty that the inexorable technology push and market pull will create the demand for these services in the community and an opportunity for those who will choose to participate in this new evolving information service activity.

Figure 1, which follows this testimony, depicts symbolically the organization and participants of a mature community information and service system, which is an interactive computer-based information, communication, and transaction services utility. Shown are those entities considered most qualified as service providers as well as those most likely subscribers or users of the services provided. The technologies, hardware, software, and connectivity requirements necessary to this utility are at hand and represent no serious barriers to its implementation.

The most severe obstacles to the realization of these objectives are organizational and relate specifically to the problems in-

Community Information and Service System

- **A Computer-Based Information, Communication, And Transaction Services Utility For Rural And Small Urban Communities**



Users:

SERVICE PROVIDERS:

CHAMBERS OF COMMERCE
HOSPITALS
LIBRARIES
EDUCATION INSTITUTIONS
PUBLIC SAFETY
POLICE/FIRE DEPARTMENTS
LOCAL GOVERNMENT
WEATHER BUREAU
AGRICULTURE DEPARTMENT
NEWSPAPERS
STATE & FEDERAL GOVERNMENTS
SOCIAL SERVICES
CHURCHES
WELFARE AGENCIES
HEALTH & MEDICINE
SHOPPING SERVICES
DATA BASE PROVIDERS
FINANCIAL INSTITUTIONS
HOUSING SERVICES
COMMUNITY CALENDAR
CREDIT AGENCIES
BETTER BUSINESS BUREAU
CLASSIFIED ADS
EMPLOYMENT AGENCIES
COMPUTER SERVICES
COMMUNICATION SERVICES
REAL ESTATE
TRANSPORTATION

Fallout:

- Gross community product - $
- Community trade imbalance - $
- Business & service opportunities
- Community business awareness

Figure 1

volving the integration of the public and private resources necessary to make the required services viable. It is recommended that a public agency such as the National Commission on Libraries and Information Science (NCLIS) be assigned the program responsibility for developing a joint public/private sector pilot test of the community information and service system. Another recommendation is that NCLIS take responsibility for followup programs to enhance the benefits of such utilities.

Public Law 91-345, which established and chartered NCLIS, assigned these duties to the organization. The legislation states, in part, that "The Commission shall have the primary responsibility for developing or recommending overall plans for..." and "conduct studies, surveys, and analysis of the library and informational needs of the Nation, including the special library and information needs of rural areas..." and "promote research and development activities which will extend and improve the Nation's library and information-handling capability as essential links in the national communications networks."

I can further testify to the appropriateness of such assignment to NCLIS in that I was a private sector advisory committee member to the NCLIS-sponsored White House Conference on Library and Information Services (WHCLIS) which convened in November 1979. The planning, development, implementation, and critique of the WHCLIS evolved through a most successful joint public/private sector effort that was organized and orchestrated by NCLIS.

Mr. Chairman, I'm very pleased to have had the opportunity to deliver this testimony, which I most sincerely believe can offer a viable alternative to resolve certain rural and agriculture-related deterioration. I have discussed and tested these considerations with a number of my colleagues in both the public and private sectors and am pleased to report that they have offerd enthusiastic support of these proposals.

I'll be most pleased to respond to any questions and/or comments offered.

October 28, 1982

Mr. Gerald J. Sophar
Coordinator, Rural Programs
National Commission on Libraries and Information Science
1717 K Street, N.W. Suite 601
Washington, D.C. 20036

Dear. Gerry:

I've completed the testimony on "Information Needs of Rural America" which you invited from me, and am forwarding it as an attachment to this note.

As we've previously discussed, I feel very strongly about the proposed "Community Information and Service System" and will be working hard toward its implementation. As a matter of fact I will be chairing a roundtable discussion at the upcoming IIA annual meeting on this very subject. You see, I'm exploring now the opportunities for private sector participation and how to bring it about.

Gerry, I'd like a copy of the other testimonies offered on this subject, can you provide them?

Sincerely,

Daniel H. Carter

Enclosure

cc Toni Carbo Bearman
Executive Director
National Commission on Libraries and Information Science
1717 K Street, N.W. Suite 601

Telelearning for Rural America

by WILLIAM R. OATES
School of Communication
University of Alabama

A Position Paper for the Joint Congressional Hearing on "The Changing Information Needs of Rural America: The Roles of Libraries and Information Technology"

Meeting the information needs of rural America requires a new partnership between education and telecommunications. Current institutional arrangements are inadequate for achieving equal educational opportunity for all Americans. Rural areas have available educational television, remote classes via closed-circuit facilities, and now information services through home computers connected to national networks. The new partnership that is needed, however, requires a more thorough merging of the interests of telecommunications providers and educational institutions. Videotex and other new computer-based information technologies will change the role of librarians, the roles of teachers, and the nature of institutionalized education. Many things stand in the way of achieving a new institutional partnership, but it is an important national goal with special significance for rural America. A successful partnership should have the following results.

Schools will become centers more of learning than of teaching. Interactive learning resources of proven effectiveness will be available to individual students. Some information resources will be delivered via telecommunications links, and some through physical delivery of instructional software; most will be based upon electronic information technologies. Students will work toward individual learning goals at their own pace with immediate didactic feedback from their personal "bionic tutors." Students will find these personal learning interactions to be enjoyable and intellectually rewarding. They will spend little more time isolated from others than good students do now while privately reading. Reading still will be important, too.

The teacher will be less a disseminator of subject content and more a subject matter guide and learning consultant. Teachers will set the learning goals, provide the learning resources, and add a pinch of inspiration and guidance. They also will check progress, answer difficult questions, and lead periodic discussions of learned material.

As the functions of schools and teachers move closer to the functions of technologically equipped libraries and information specialists, public libraries and public schools may merge into joint "public learning centers." Participatory museums may also become parties to such mergers. Such joint learning centers will efficiently supervise public learning programs for students of all ages. Seeing personal benefits, childless Americans will return tax support to the new learning centers. Society will retain a vested interest in the organized supervision and certification of learning. Telecommunications will deliver many individual learning experiences directly into people's homes. Programs of study may be arranged with fewer hours spent at a learning center than are spent at today's schools. The learning center will be an essential institution, however, providing seven major functions: 1) guidance of individual learning, 2) specialized teaching, 3) certification of learning, 4) public access to costly information resources, 5) educational "day care" for some students, 6) socialization and extracurricular activities, and 7) instructional design and production of telelearning resources.

The first two functions are traditional roles of teachers. While specialized teaching needs will remain, resource management and learning guidance will become predominant roles. The range and power of what one teacher may accomplish with students will be greatly extended by the new information technologies. One obstacle is the current failure of many schools to prepare teachers for their new roles in the telelearning environment.

Public learning centers will inherit the schools' institutional role of certifying the learning achievement of individuals. Types of diplomas, degrees, and certificates may proliferate, however, as more individually tailored learning programs become possible.

Poorer segments of society will not be able to afford the extra cable services, home computers and database accesses that may comprise many at-home learning programs. Therefore, it is essential that these information resources be made available to the general public. In serving this function, public learning centers will carry on a traditional role of the free public library. Failure to provide for wide public access to the new information technologies will further divide society into the "information-rich" and the "information-poor," the consequences of which other writers already have warned.

The 1980 census reveals that a majority of children (53 percent) now have working mothers. In 1970, only 37 percent of children did. For better or for worse, the custodial "day care" function of schools and libraries will be retained by the new public learning centers. Regular programs of learning activities must be provided for many students, but not for all. Some students can have individual schedules that permit more at-home learning and greater opportunities for employment and other activities.

Sports, bands, music clubs, computer clubs, and numerous other cultural and social groups probably will organize around the public learning center. This social role has always belonged to schools, libraries, and museums. Telecommunications will enhance communications among members of these groups through electronic "bulletin boards" and message services.

Finally, the new public learning centers will have production departments for the development and testing of new telelearning resources. While some instructional resources will be provided by commercial "electronic publishers," some instructional communication will need to be produced locally. For many purposes, teachers must control their own "electronic blackboards." A new breed of teacher will concentrate upon the production of telelearning resources. Good teachers must do this; designing a computer-assisted instructional lesson, for example, requires much more thinking about teaching than about computing. The rationalization of teaching required by technological mediation will result in our learning more about what comprises good teaching.

The last function of public learning centers—producing effective telelearning resources—will require extensive cooperation between telecommunications and education organizations. The former can provide ubiquitous media; the latter can provide subject content and teaching expertise. Neither can act alone to achieve the future I have described.

Telecommunications firms devising new information systems such as videotex may not be planning for substantial public educational uses. Failure to so plan may ultimately doom the American ideal of equal educational opportunity. Such failure at least further injures a battered American institution.

If education is invited to be a full partner in the new telecommunications systems, educators must throw off the shackles of technological prejudice and the egoism of being the original source of knowledge. With elected officials, they must innovate new institutional arrangements for providing and overseeing universal public education.

Many of the changes I have described will come in some form, whether or not they are adequately planned for. Without planned directions, the technological imperative of new information systems may further bruise and splinter the American society rather than move it toward national goals. If we are to meet the information needs of rural America, creative planning must begin today for a new partnership between public education and telecommunications providers.

Mr. Gerald J. Sopher
National Commission on
Libraries & Information Science
1717 K St. N.W., Suite 601
Washington, D.C. 20036

Dear Mr. Sopher:

Enclosed is a statement that I would like to have included in the official hearing record of the July 21, 1982, hearings on "The Changing Information Needs of Rural America—The Roles of Libraries and Information Technologies." My statement is titled, "Telelearning for Rural America," and calls for a new institutional partnership between education and telecommunications providers. The substance of my statement deals with the results that such a partnership could bring about—results that could help meet the changing information needs of rural America.

New information technology and computers in education have been special interests of mine for about a decade. My Ph.D. dissertation was on the effectiveness of delivering English basic skills instruction via the PLATO educational computer network. Currently, I am serving a three-year term on the Instructional Technology Committee of the National Council of Teachers of English. I was pleased to see that these hearings were being conducted, and I hope that my statement may in a small way help move forward the public discussion.

Best regards,

William R. Oates
Associate Professor

WRO/sor

The Honorable Mark Andrews
417 Russell Senate Office Building
Washington, D.C. 20510

Dear Mark:

Thank you for inviting me to testify before the Congressional Hearing concerning the need for information service in rural America. I regret that I am unable to attend due to prior commitments. Nevertheless, I am extremely interested in the development of information technology in rural areas and feel that continued research and progress in this field is important. Therefore, I ask that you include this letter in the record of the proceedings.

Information exchange is increasingly important in our world of growing complexities. Too often, rural areas are overlooked in providing an inflow of timely data. Such failure in the future will be increasingly critical and must be avoided. Crucial elements are libraries, data processing, and scientific process.

We need to recognize, of course that we are at the outset of the age of the information explosion. Just this week, the *Wall Street Journal* contained a full-page tantalizing ad, in the context of office management, of a new and simplified computer keyboard developed by a British firm. Information, to be useful, must be in ordered, priority form and must be accessible on a timely basis. There is no such thing as "information overload" when the information is useful and usable.

Again, we appreciate the opportunity to comment and commend you for this hearing.

Sincerely,

Arlen Specter
Pennsylvania
United States Senate
Washington, D.C. 20510

August 4, 1982

Senator Mark Andrews
Joint Congressional Hearing
c/o NCLIS
Suite 601
1717 K Street, NW
Washington, D.C. 20036

RE: "WORLD FUTURES"

"No man is an island, entire of itself but each is a piece of the continent, a part of the main." John Donne referred to persons, but this quote is equally applicable to libraries, from public to state to academic to health science, in the rural setting.

In my work as a medical librarian in a rural, 115-bed hospital, and as coordinator for a group of small health science libraries in central South Dakota, it has become increasingly clear that all types of libraries *must* interact in order to provide adequate information to meet the needs of rural patrons. No type of library or librarian can afford to ignore the necessity for networking between libraries just to fulfill the basic needs of a patron: information to grow, work, create, and relax. The rural patron has been penalized enough—we must allow him/her access to the services available to the rest of the country. Federal support of rural networking is a must!

A second concern is that the rural library, especially the public library, fulfill the patron's needs for hard information—information for personal learning projects to equip people to live in the present and future. The trend is for self-instruction, and rural libraries must keep current and not be allowed to dwindle into respositories of fiction and recreational reading alone. A recommendation on the federal level as well as funding can remedy this possibility.

Thirdly, technology appears to be passing the rural library by. In many county public libraries, the latest technological advances are the telephone and the typewriter. Electronic capabilities seem light years away! Although hospital libraries are becoming more technologically aware and competent, rural public libraries are in a dark age with respect to electronic transfer of requests and information, and their patrons suffer accordingly.

In summary, the immediate future needs of rural patrons include:
1) Networking between all types of libraries;
2) Current, hard, information for career and personal growth learning projects
3) Technological advancement.

Thank you very much for this opportunity to express my views.

DeAnn Hilmoe
Medical Librarian
St. Mary's Hospital
800 East Dakota
Pierre, South Dakota 57501

APPENDIX 1

Government Publishing: Problems and Prospects

By
SENATOR CHARLES McC. MATHIAS, JR.
Delivered at The Government Documents Breakfast of The Congressional Information Service at The Annual Conference of The American Library Association Philadelphia, Pennsylvania, 1982

It is a great pleasure to be here this morning at the annual Government Documents Breakfast of the Congressional Information Service and to have this opportunity to address the members of the American Library Association.

As chairman of the Joint Committee on Printing and as a long-time advocate of public access to government information, I am delighted to break bread with so many faithful seekers of information by or about the federal government.

Each of us in different ways holds the future of American democracy in our hands. And here in Philadelphia, it seems particularly appropriate to reflect for a moment on what we can do, together and separately, to help sustain the unique form of popular government that was born in this city almost 200 years ago.

James Madison, the father of our constitution, has provided the prefect text for our reflections. In a letter to W. T. Barry, written in 1822, Madison warned that:

> A popular government without popular information, or the means of acquiring it, is but a prologue to a farce or a tragedy, or perhaps both. Knowledge will forever govern ignorance; and a people who mean to be their own governors must arm themselves with the power which knowledge gives.

I do not have to tell you that today the means of acquiring popular information about the federal government are shrinking. What we are seeing in Washington now is a government-wide trend to make information about what happens inside government more expensive and, therefore, less accessible to the ordinary citizen.

I do not think you can point the finger of blame at any one person, party, or organization, because this is government-wide. But little by little, we are choking off information about government.

The Congress is as guilty as anyone else in this. Just look at what has happened to the *Congressional Record* in the past 30 years or so. A friend of mine recently told me that, as a boy, he was fascinated by the *Congressional Record* and subscribed to it for about $2.50 a year. Now it costs $1 for a single issue and a subscription costs $208 a year. Not many kids these days—no matter how fascinating they might find it—are going to be able to pay those prices for the *Congressional Record*.

So we have to ask ourselves, "Is this an adequate means of providing popular information about what goes on in Congress? Do we expect the citizens of this country to pay their taxes and then pay an additional $208 to find out what is going on in Congress?"

Of course, the *Congressional Record* is not an isolated example of this phenomenon. In February, you could still subscribe to the *Federal Register* for $75. Now it costs $300 a year. And recently the *Commerce Business Daily* went from $130 to $175.

You can go through the federal government department by department, agency by agency. They are all demanding users' fees for the information they produce. Nobody is trying to get rich on it; nobody is going to make a profit on it. Everyone is simply saying that the people who use the information should at least pay for the paper and ink needed to convey that information to the user from the government office.

Now, from a business point of view, this all makes perfect sense. But there is more at stake here than balancing the federal books.

My concern really is what we can do to help the American people understand the complex, difficult issues and the kinds of forces that are bearing down upon their lives in a very personal way. These forces give almost every American citizen the sense that he or she is a pawn being moved by forces that are not only not understood but not understandable. Instead of being able to help people deal with this sense of frustration and this sense of powerlessness in the face of great forces, we see that their access to information which might help them is being narrowed.

I think we have a clear duty to try to widen that access if we are to prevent the farce or tragedy that Madison foresaw.

Now, I would like to tell you a little about what the Joint Committee on Printing is doing to discharge that duty. Congress has traditionally been generous in its distribution of government information to the public. In the Printing Act of 1895, Congress not only provided for distributing its own publications—such as bills, hearing records, and the *Congressional Record*—it also provided for the distribution of executive and judicial branch publications.

Section 1300 of Title 44 of the *United States Code* actually requires federal agencies to share their publications with the people, and it even specifies how many copies are to be printed. Some departments, Agriculture and Education, for

example, still provide copies of their annual reports for members of Congress to distribute to their constituents.

The 1895 Printing Act and subsequent acts also formally established the various avenues for distributing government information, among them depository libraries and the foreign exchange library program.

But the framers of the 1895 Printing Act, as thorough as they were and as foresighted as they were, were not clairvoyant. They did not anticipate the technological advances that have revolutionized the information industry in less than 100 years. Their vision was limited to information produced with ink on paper.

Today, using technologies such as microfilm, videodiscs, electronic transfer and television, we can deliver information in a variety of media to suit a variety of audiences and at lower costs. We not only can do this, but we must do it.

We are living in one of the great transitional periods of human history. Rapid change has become the hallmark of modern civilization. And the only certainty we can cling to is the certainty that if we do not master change, we will be mastered by it.

This knowledge makes me keenly aware of the impact of the new technology on libraries, Congress, and the public in general. Many of you in this room not only want to, but are able to, receive information in electronic form. Gone are the days when you had to store paper copies for every occasion, when you had to process deliveries of hard copies and then wait for new versions to arrive. Therefore, the Joint Committee on Printing is committed to easing the burden on depository libraries by examining the full potential of electronic transfer. To that end, we have just created a new group composed of representatives from the library community and federal agencies to make sure that information captured electronically in federal agencies will be available to you as you need it, without costly processing or storage fees. Despite its unweidly name, I hope the "Ad Hoc Committee on Depository Library Access to Federal Automated Data Bases" will be able to help us accomplish this mission.

I favor all federal publications—except for those that are restricted for reasons of national security—being available to the public through the depository libraries. In recent years, we have moved to bring whole new classes of material into this program. Although eligible for inclusion, much of the material was simply not being provided by the publishing agency. Maps and titles done under contract are examples of what I mean. Today, I am happy to be able to announce that this fall the maps of the Defense Mapping Agency and the U.S. Geological Survey will be made available to depository libraries as a result of our efforts.

Keeping track of more than 50,000 federal titles annually obviously takes work and cooperation. The staff of the Joint Committee on Printing has worked long and hard to promote agency cooperation in creating a single catalog record for each federal publication. The Library of Congress and the GPO working together have produced one authoritative cataloging record that can be recognized by libraries worldwide. It is available in two formats—a printed monthly catalog and online to library computer systems.

Now for a few words about the *Congressional Record Index*. We are taking advantage of the new technology to create at GPO an online data base for the *Record Index* so that libraries will have virtually instant access. Our indexers are eliminating their 3 by 5-inch cards and are now keyboarding directly into the main *Record* data base. This saves time and money and assures you of receiving *Record* information when you need it.

I am also pushing for speedy passage of S. Res. 20, which provides for televising Senate debate and would be another way of giving you access to our deliberations. A number of libraries now have cable television studios where they can produce their own programs as well as air programs made elsewhere. If the Senate votes to televise its debates, the Library of Congress will record and archive the audio and visual transmissions of floor proceedings. Ninety days later these recordings would be made available to the public under terms established by the Senate Rules Committee.

The Joint Committee on Printing is also in the process of revising Title 44 and its *Printing and Binding Regulations* to bring them into the world of 21st Century technology. The definition of printing is changing dramatically. Electronic imaging, be it on paper, file, or tv screen, will speed up and individualize our information flow. More information will be available to more people in more forms than ever before. As a result, the Joint Committee's mandate "to eliminate waste, neglect, and duplication of effort in government printing, binding, and distribution" will have new methods at its disposal. From now on, each agency's particular need can be filled more effectively and economically by selecting from a variety of approaches: for example, "on-demand" electronic printing, computerized design and makeup, microform, laser-imaging, and new techniques we have not yet imagined.

The Government Printing Office is also moving to streamline its procedures and its processes. A new computerized estimating and tracking system at GPO has begun to speed up the printing process, and when it is fully in place, it will ensure that the Superintendent of Documents has a record of every publication processed through the GPO. The Superintendent of Documents has already begun a marketing program designed to target government information to appropriate audiences.

These are some of the new directions we are exploring in an effort to master the change that is revolutionizing the printing industry. Our immediate objective is to make the Joint Committee on Printing and the Government Printing Office responsive to the printing and publishing needs of the entire federal government, and to do the job as economically and efficiently as is humanly possible.

Our ultimate and overriding objective is to assure that you and the American people have timely and full access to the information and the knowledge without which our popular government cannot survive.

We cannot achieve this goal without your help and support. But by working together, we can achieve all the miracles that are possible in this miraculous age.

The Honorable Mark Andrews
United States Senate
417 Russell Senate Office Building
Washington, D.C. 20510

Dear Mark:

I am delighted that the United States Congress is participating in the Fourth General Assembly of the World Future Society. Unfortunately, I am not able to attend the Joint Congressional Hearing on "The Changing Needs of Rural America and the Roles of Libraries and Information Technology." However, I would like to comment briefly on the subject matter and submit information for the record.

Libraries continue to play an important role in getting information to our rural communities, and the Congress must do whatever it can to assist them in doing a better job. As Chairman of the Joint Committee on Printing, I have had an opportunity to become acquanted with the ways in which Government information is developed, processed and distributed to the American public.

I also have the pleasure of monitoring and supporting one of the most successful programs through which federal information is disseminated without cost to the citizens of rural communities. That is the depository library program. The Congress considered the depository program as such an important vehicle for educating the rural populace that it made the land-grant college libraries a part of the depository system. Some 68 land-grant colleges, including North Dakota State University, are now a part of the depository library program. Since the land-grant colleges do not reach all rural citizens, the Joint Committee encourages all depository libraries to make their information available through loans and other outreach services to rural communities.

Recently I had the pleasure of addressing a group of librarians from around the country at the annual Congressional Information Service/American Library Association breakfast in Philadelphia. I would like to submit a copy of my remarks for the permanent record.

With best wishes.

Sincerely,
Charles McC. Mathias, Jr.
Chairman
Joint Committee on Printing
Congress of the United States

Enclosure

cc: Gerald Sophar
NCLIS

APPENDIX 2

Reference Services In Rural Public Libraries In Communities Of 25,000 Or Fewer People

BERNARD VAVREK

College of Library Science
Center for the Study of Rural Librarianship
Clarion University of Pennsylvania

Preface

This publication is dedicated to the board of directors of the H.W. Wilson Foundation and particularly to Jim Humphry and Leo Weins, who displayed confidence and support for the nature of this research.

Special appreciation must be noted for the critical contributions made by Nancy Caupp, Leslie Corey, Steve Herb, Mike Jaugstetter, Susan Kizzire, Karen Orlando, Karen Saunders, and Becky Sheller. Without the involvement of these graduate assistants, this project would have been impossible.

Also, the contributions provided by the following list of distinguished librarians were essential to the success of this project: Bob Case, Tom Childers, Jean Ferguson, Andy Hansen, Donald Jay, Bill Katz, Gerry King, Mary Jo Lynch, Anne Mathews, and Sally Trace.

Special recognition must be given the typist (and word processor), Patty Alworth, who created legible records from masses of scribbled notes.

Finally, this project could not have been accomplished without the cooperation and contribution of my friend and colleague, John Head.

Introduction

This research project developed out of two circumstances: first, the report, in 1961, issued by the Reference Services Division of the American Library Association entitled, *Reference Service in American Public Libraries Serving Populations of 10,000 or More*[1]; and second, the activities of the Center for the Study of Rural Librarianship, which have attempted to bring national attention to the distinct phenomena of "rural librarianship."

Interestingly, while public libraries within populations of 25,000 or fewer people represent over 80 percent of the total number of public libraries in the United States,[2] this "invisible giant" has been hidden behind the shadows of large metropolitan libraries and systems. This research was not viewed as a confrontation between Davids and Goliaths or meant to be a sentimental examination of the "haves" and "have nots," however. Rather, the long range goal of this project was to gather data that would help to initially describe some of the circumstances in which, and because of which, rural information services exist and endure. Further, the assumption was that this effort at data gathering would be the beginning of a series of studies directed toward interpreting rural librarianship in general and information services in specific. Essentially, the task was to describe the mainstream of public librarianship in America.

For the purposes of this project, the terms "reference" and "information service" will be used synonymously. Conceptually and operationally the author's definition of reference/information service denotes all of the variables that exist between the reader and the library environment that are organized to provide service. Reference/information service is assumed to be the nature of the library itself.

When my colleague, John Head, and I began formulating an approach for maximizing our project goal, we chose a survey instrument that had been used for research in Pennsylvania as a workable draft document.[3] After the questionnaire was reworked and expanded, it was circulated among our external consultants for their views and suggestions. Finally, after doing some pretesting among our library science students, an "official" pretest was conducted by randomly selecting small public libraries from Ohio, New York and Pennsylvania. In March of 1981, 100 questionnaires were mailed and 56 were returned. Based upon our perceptions of how well the surveys were completed and the instructions understood during the pretesting, a final examination and honing of the questionnaire was completed.

A critical concern related to the final directions that accompanied the questionnaire as a cover sheet. Because of this author's conviction about reference service being the essence of a library, and the fact that in a small library all hands do a little bit of everything, frequently without the luxury of departmental organization, a compromise was devised for answering purposes. The directions specified that if a reference librarian were available, he or she should be the responding person. Where no personnel distinctions were possible, it was requested that the data represent a consensus of the entire staff.

The sample selection was made by using the *American Library Directory*. The first public library on each page which met our definition, that is, an institution within a population of 25,000 or fewer individuals, was chosen as part of the sample. The universe consisted of approximately 6,797 libraries. On May 11, 1981, 1,111 questionnaires were mailed with self-addressed and posted envelopes included to facilitate return. A worksheet on each library was kept in the same numerical order in which the questionnaires were mailed.

During the summer and into the early fall of 1981, followup on the survey was pursued by telephone. Each individual to

whom a questionnaire had been sent and who initially failed to return the survey form was phoned at least once. The tribute paid to the graduate assistants in the preface of this document was not meant to be a hollow expression of appreciation. The hundreds of phone calls that were made encouraging tardy respondents could not have been achieved without the help of those individuals cited earlier.

By September 30, 1981, 700 survey forms had been returned. For a variety of reasons, but particularly because of a coding problem, 34 questionnaires were considered invalid. The data to be subsequently reported here was based, therefore, on a final sample of 666 respondents or a 60 percent return.

Coding sheets were devised for those questions that were amenable to computer tabulation and analysis. The SPSS (Statistical Package for the Social Sciences) was used as the program for generating the descriptive and analytical statistics. Mean averages were used throughout this document. For those questions which required free responses on the questionnaire, tabulation was laboriously done in the conventional manner by our dedicated graduate assistants. To assist with the interpretation of both the descriptive as well as the inferential statistics, Pam Hufnagel provided substantial assistance as statistical consultant for the project.

For purposes of this preliminary report, references will be made repeatedly to samples "A" and "B." While on occasion the author may forgetfully or otherwise lapse into reminding the reader about the differences between samples "A" and "B," these prompts will be kept to a minimum. Sample "A" represents the total number of responses analyzed, i.e., 666. Sample "B" is a subset of the total (N = 234) and represents libraries within communities of 2,500 or fewer individuals. For complete accuracy it is significant to remember that the populations dealt with in the survey were census populations—as opposed to populations served, which frequently were several times larger than the official populations. The subsample of 2,500 was chosen because it met the official census definition of a rural area.

One final comment about the survey instrument is in order before proceeding, however. After all of the analysis of the survey questions, both internally as well as externally to the Center for the Study of Rural Librarianship (CSRL), including the pretest, the sequence of the questions and the overall questionnaire format seemed to be suitable to the task ahead. The directions were apparently logical enough to be consistently followed by the respondents. These conditions prevailed except with two questions, i.e., 7 and 8, which were of high interest to this author because they dealt with aspects of staffing and educational training. While questions 7 and 8 will be described more fully subsequently, it was ironic as well as annoying that only after the fact did the shortcomings of those questions appear obvious. Fortunately, then, it was only necessary to correct the weakness of two questions out of 33.

The complete text of the survey instrument can be found in appendix A.

Since the first three questions dealt with what could be described as directory information, i.e., name, address, etc., question 4 was the initial one tabulated. It asked, "To what type of library system does your library belong?" The responses from sample A are as follows:

County	156 (27.6%)
Multicounty	231 (41.0%)
Other	177 (31.4%)

Because the question somehow assumed that every library would be part of a system, it was not surprising that the "other" category was so sizeable. Of the 155 respondents actually interpreting "other," 52 (33.5%) indicated "city or town," 42 (27.1%) noted "library system," 18 (11.6%) said "library networks," 15 (9.7%) responded with "independent," 12 (7.7%) indicated "regional" and "district," and 4 (2.6%) identified "school district."

Responses to question four from sample B were:

County	46 (21.3%)
Multicounty	90 (41.8%)
Other	79 (36.7%)

The sizeable "other" category in sample B included a wide variety of choices. The major ones, however, were identified as "city," 21 (26.9%); "regional," 20 (25.3%); "system," 14 (17.7%); "district," 6 (7.5%); and "independent," 3 (3.7%).

Question 5 asked librarians to identify the type of the library in which they were working. Sample A responses follow:

Municipal	347 (52.1%)
County	126 (18.9%)
Other	185 (27.7%)
Blank (missing)	8 (1.2%)

Of those who identified "other," 35 (24.8%) listed "city/county," 33 (23.4%) gave "township," 22 (15.6%) responded with "regional," 21 (14.9%) indicated "school district," 18 (12.8%) identified "association," and 12 (8.5%) listed themselves as "library districts." Without a glossary of definitions built into the questionnaire, it was somewhat difficult to satisfactorily analyze the similarities and/or differences between and among some of the categories cited above. Nevertheless, the uniqueness of the public library in the United States is to a large part derived from the complexity of institutional governance around which it is organized.

Responses from sample B (2,500 or fewer population) to question 5 indicate the following:

Municipal	103 (44.0%)
County	45 (19.2%)
Other	81 (34.6%)
Blank (missing)	5 (2.1%)

From the "other" category, 29 (36.2%) identified their library as "township," 16 (20.0%) gave "association," 12 (15.0%) listed "city/county," 10 (12.5%) cited "regional," 8 (100%) noted "library district," and 5 (6.2%) responded with "school district."

Among the interesting answers to question 5 was the number of "school district" responses for the total sample, i.e., 21 (3.1%). Presumably this category identifies a statistically small but intriguing number of public/school library combinations. In the future it will be of some interest to chart the growth of this "phenomenon," which may grow because of economic exigencies.

"How many miles is the closest city of over 25,000 population?" was the next question. The result of sample A was 40 miles. For sample B the average distance was 52.6 miles. The relevance of this question was to illustrate the magnitude and suggest the significance of geographical isolation. For the rural librarian, and this theme will be extended in further questions, access to other cultural and information resources is aggravated by distances. Instead of a fairly convenient convergence of library/museum resources found in large metropolitan areas, all generally within the reaches of mass transportation, rural librarians must relate to alternate informational resources only at long distance, usually through the vagaries of interlibrary loan. And, of course, mass transportation in rural America consists of one's automobile.

Regardless of the care taken in preparing the questionnaire and the pretesting activities, the original data resulting from survey questions 7 and 8 were determined to be invalid by this author. These two questions, dealing with staffing and levels of training, can be examined in appendix A. The fact that question 8 failed to include part-time or full-time categories made it impossible to compare these data with question 7. Rather than use only part of the data, or eliminate the reponses to both questions, it was decided to do a resurvey. Emotionally, this was difficult to accomplish. Nevertheless, during the first 2 weeks of October 1981, a telephone survey was conducted of approximately 16% (N = 106) of the total sample of forms received. Every sixth person who had responded to the original questionnaire was phoned and asked to verify the original data as well as provide additional information relating to staffing and education. The categories "full-time" and "part-time" were determined by the respondents, who were also asked to provide the number of hours worked. Interestingly, the sample pursued through the telephone survey included the same distribution of small libraries (sample B) to the overall sample (35 percent) as the original sampling. Further, insofar as question 7 was concerned, i.e., in relation to the number of staff members, the original total was 8.4 persons. The total on the resurvey was 8.7. Based on this evidence, one would like to conclude that the resurvey validly represented the total.

Responses From Sample A For Questions Seven And Eight:

7.	Staff Members	Helps with Reference	Hours per Week
Salaried			
Full Time	3.34	2.87	28.7
Part Time	3.18	2.01	14.0
Volunteers	2.22	0.56	2.8
Total	8.74	5.44	45.5

8. Educational background of staff.

	Full Time	Part Time	Volunteers
Staff with H.S.	0.96 (26.7%)	1.64 (51.6%)	1.10 (49.5%)
Bachelor's degree	0.78 (23.3%)	0.63 (19.8%)	0.97 (43.6%)
Master of Library Sci.	0.80 (23.9%)	0.23 (7.2%)	0.01 (0.4%)
Other	0.80 (23.9%)	0.68 (21.4%)	0.14 (6.3%)

Of those responding to the "other" category, the largest numbers cited were "some credits in library science;" "two years of college;" "some college;" and "associate degree." The "other" category was not tabulated for sample B.

7.

Following are the descriptive statistics from sample B (2,500 or fewer):

	Staff Members	Helps with Reference	Hours per Week
Salaried			
Full Time	1.30	1.30	17.6
Part Time	1.71	1.32	10.4
Volunteers	1.74	1.32	2.3
Total	4.75	3.94	30.3

8. Educational background of staff.

	Full Time	Part Time	Volunteers
Staff with H.S.	0.45 (34.6%)	0.76 (44.4%)	0.53 (30.4%)
Bachelor's degree	0.32 (24.6%)	0.32 (18.7%)	1.00 (57.5%)
Master of Library Sci.	0.16 (12.3%)	0.13 (7.6%)	0.00 (0.0%)
Other	0.37 (28.5%)	0.50 (29.2%)	0.21 (12.1%)

Perhaps it's obvious, but the rather sad state of staffing in the libraries surveyed should be a matter of national concern. Academically trained librarians are only available in approximately one-forth of the entire sample and less than half of that number are available in libraries of 2,500 or fewer people—while the national average in 1978 for all public libraries was 41 percent.[4]

The "helps with reference" category was utilized, from the data provided by the respondents, to illustrate what portions of staff positions were taken up with providing reference services. In sample A the percentage was 62% of the total staff, and for sample B it was 83%. While it probably isn't surprising that the percentage is higher among smaller libraries, considering staffs are smaller, one should note particularly how volunteers are utilized in helping with reference services—10.3% in sample A, but 33.5% in sample B.

Further, on the matter of volunteers, the average percentages for volunteers as part of the staffing component were 25.4% and 36.6%, respectively, for samples A and B. Consider for comparison, however, the fact that in Pennsylvania as of 1979 the percentage of volunteers in the state was 43.2 percent of the total staff available, with academically trained librarians (those with a master of library science degree comprising only 13.5 percent of the total. What weighs against Pennsylvania in this matter of staffing is the fact that it is such a rural state, and the vast majority of public libraries are in small communities that are unable to provide decent wages to attract academically trained librarians.

The next survey question, number 9, dealt with the official, i.e., census populations of the towns in which the responding libraries were located. The average population cited in sample A was 6,731 and for sample B it was 1,255.

Figure 1 shows a frequency distribution of the libraries and their populations for sample A.

In addition to and as an extension of the census population, respondents were asked to identify the size of their service area. For sample A it was 23,853 and for sample B it was 4,690 - approximately 3½ times the census populations in both cases. While it is somewhat difficult to adequately generalize the significance of such sizeable service areas because of the variety of different ways in which public libraries are funded across the country, in those states where financial support is not based, for example, on a county scheme, the distinct problem becomes one of attempting to collect a "fair share" from the towns, townships, etc., which

Population Range	Number of Libraries	Percentages
1- 499	33	5.0
500- 999	56	8.5
1,000- 2,499	142	21.5
2,500- 4,999	110	16.7
5,000- 9,999	150	22.8
10,000-25,000	168	25.5

Figure 1

comprise the service area. The major financial burden for public library support, otherwise, continues to reside particularly with the municipality in which the library is located.

Parenthetically, it is of interest to note, using Pennsylvania once again as an example, that the much heralded growth of nonmetropolitan areas has been essentially the growth of townships which surround municipalities as distinct from the growth of towns and cities. If this trend continues it will further exacerbate the problem of who pays for public library service.

The next two survey questions dealt with the interesting matter of the library's annual budget. For sample A the average budget was $82,091, and the budget average for sample B was $28,464. Frankly, the sample A response was much higher than this author expected. Undoubtedly it was boosted because of the larger libraries in the sample. In light of the fact reader that the average number of salaried staff members in the sample B libraries was three persons, a total annual budget of $28,464 would hardly seem an adequate level of financial support. Figure 2 shows the frequency distribution for all of the libraries in relation to budgets. Note that half of the libraries have budgets of less than $50,000.

Budget Range	Number of Libraries	Percentages
$0- 4,999	135	20.5
$5,000- 9,999	41	6.2
$10,000- 19,999	77	11.7
$20,000- 29,999	38	5.8
$30,000- 49,999	57	8.6
$50,000- 74,999	62	9.4
$75,000-149,999	128	19.4
$150,000-249,999	82	12.4
$250,000 & Up	39	5.9

Figure 2

In relation to the sources of budgetary funds, the following data represent the total for sample A.

12. Sources of budget funds ($).

Local	$44,227. (53.8%)
County	21,690. (26.4%)
State	7,428. (9.0%)
Federal	2,370. (2.9%)
Other	6,370. (7.8%)
Total	$82,091.

While local support is usually recognized as the major source for public library funding, it is of some interest to note that the LIBGIS survey of 1974 defines the national average in this regard, local support to be 75 percent.

For sample B, the sources for funding suggest somewhat of a reversal of the national tendency toward local library support. However, this skewness may really be caused by the fact that approximately 20 percent of the respondents indicated that their library was "county," and that overall in sample B, 69 percent of the libraries belonged to either a county or multi-county system. Sample B data for sources of funding follow:

12. Sources of budget funds ($).

Local	$7,292.(25.6%)
County	13,420.(47.1%)
State	4,512.(15.8%)
Federal	936. (3.3%)
Other	2,304. (8.1%)
Total	$28,464.

Question 13 asked the respondents to identify the other libraries available in the service area. While the question sought to highlight the number of libraries, there was no way to determine from the survey results, even when other libraries were present, which of these libraries actually cooperate and/or extend the use of resources and facilities to public library patrons. School libraries, while comprising over 75 percent of the totals in both samples, are usually not available for use to the community because of the limited number of hours most are open, i.e., only during school periods, except in cases of school/public library combinations. Also, the resources available in most rural school libraries are usually not a great improvement over the variety of information accessible in the public library. The results from samples A and B follow:

13. In your service area what other libraries can be found?

Junior or Community College	0.3	(5.0%)
Public/Private School	4.6	(76.6%)
Technical School	0.2	(3.3%)
College or University	0.4	(6.6%)
Special Library	0.5	(8.3%)
Total	6.0	

SAMPLE A

13. In your service area what other libraries can be found?

Junior or Community College	0.2	(7.7%)
Public/Private School	2.0	(77.0%
Technical School	0.1	(3.8%)
College or University	0.2	(7.7%)
Special Library	0.1	(3.8%)
Total	2.6	

SAMPLE B

It may be of interest to know that 49 percent of the libraries surveyed had only school libraries from which to draw. Added to the fact that a city of 25,000 or larger population is 40-50 miles away, one is presented with a rather poignant reminder of the bleakness facing most rural librarians in attempting to access resources.

Because of the interest in realizing as much normative data as possible about the phenomena of information services in rural America, it was considered of some importance to collect at least a little information about the stalwart of rural services, for example, the bookmobile, and the "new kid on the block," books-by-mail. The results from samples A and B are as follows:

14. Does your library offer the following services?

	Yes	No
Bookmobile	126 (18.9%)	540 (81.1%)
Books-by-Mail	155 (23.3%)	511 (76.7%)

15. If your library has bookmobile service, is reference service provided?

Yes	No	Missing
86 (67.7%)	40 (31.5%)	1 (0.8%)

SAMPLE A

14. Does your library offer the following services?

	Yes	No
Bookmobile	47 (20.1%)	187 (79.9%)
Books-by-Mail	63 (29.9%)	171 (73.1%)

15. If your library has bookmobile service, is reference service provided?

Yes	No	Missing
31 (66.0%)	15 (31.9%)	1 (2.1%)

SAMPLE B

Although the historical stalwart, bookmobiles are apparently starting to lose out to the mail approach of reaching customers in the libraries surveyed. This comment should not overshadow the fact, however, that over 75 percent of the libraries participated in neither of the two services. The data resulting from question 15 about reference services were only of marginal use since they were not related to anything specifically—such as, for example, defining or describing reference services in bookmobiles.

The 16th question was concerned with maximum traveling distances necessary for patrons to reach the library. For sample A the average was 14 miles and for sample B the distance was 12.4 miles. Since this question was predicated on the service area, it shouldn't be surprising that the longer distance to travel was within the larger service area, i.e., of sample A. Furthermore, 35 percent of the libraries surveyed had traveling distances of over 14 miles.

Question 17, as far as this individual perceived, was a key question, although we realized before the survey began that it would be a troublesome one to tabulate—and that was the case. The question asked the respondent to define reference service. This question was really a test of the librarians' philosophical and practical attitudes toward reference services. Emerging from the responses were the following categories shown in figure 3.

Responses	Sample A (N = 360)	Sample B (N = 82)
Answering Questions	142 (39.4%)	36 (43.9%)
Finding Information	109 (30.2%)	21 (25.6%)
Offering Services	79 (21.9%)	7 (8.5%)
Materials	27 (7.5%)	18 (21.9%)
Library Instruction	3 (0.8%)	

Figure 3

Although the categories were frequently interrelated, which made isolating the key thought difficult, what did emerge from a content analysis approach was a slight preoccupation with "answering questions" as opposed to a more universal objective of "finding information." It's encouraging, however, to note that by combining "finding information" and "offering services" these concepts edged out "answering questions" and "materials." Further, it's not so surprising that sample B respondents were less inclined toward emphasizing the "service" aspect of reference work than sample A respondents. Reference service in the small library is a very practical matter.

The next two questions were asked to determine the respondents' orientation toward reference service as a distinct library activity. Unfortunately, it was not surprising to find that 88percent of the respondents in both samples did not have written policy statements. While the document "Commitment for Information Services: Developmental Guidelines"[6] was produced in 1976 and then revised in 1979, its impact is still to be felt on a national level. This, however, is not only true for rural librarians in public libraries. It is a weakness found in all types of libraries wherever they are located. Without a written policy, which is intended both for the librarian's as well as the patron's benefit, reference service will continue to be an ambiguous activity for all who are involved. The data resulting from sample A and sample B follow:

18. Do you have a written reference policy statement on the reference service that you offer?

Yes	No
77 (11.6%)	589 (88.4%)

(a) If "yes" did you consult any published standards or guidelines to establish your policy?

Yes	No
45 (58.4%)	32 (41.6%)

SAMPLE A

18. Do you have a written reference policy statement on the reference service that you offer?

Yes	No
27 (11.5%)	207 (88.5%)

(a) If "yes" did you consult any published standards or guidelines to establish your policy?

Yes	No
16 (59.3%)	11 (40.7%)

SAMPLE B

The impact of the next question, number 19, which dealt with whether or not the respondents had a policy against answering specific types of questions, was lessened by the fact that so few librarians actually had written policies to direct their reactions. Only 189 librarians (28.4%) of sample A answered "yes" to question 19, and 477 (71.6%) answered "no." In sample B, 33 (14.1%) answered "yes," and 201 (85.9%) answered "no." While these responses can hardly be considered evidence of restrictive attitudes of providing service, in the absence of written policies, better than normal marketing skills would have to be utilized to inform the public of available library services.

While question 17 was oriented toward getting the respondents to define reference service in "their own words," the next question sought to determine operationally what reference service meant to the librarians involved in the survey. Students of reference service may not be surprised at the following results of sample A because they are certainly not unexpected. But one should note, for example, that in addition to response "e," answers "f" and "d" also show some lack of popularity when compared with the other responses.

20. Which of the following does your library provide?

	Never	Occasionally	Standard Service
(a) Directing patrons to community resources	17 (2.6%)	186 (27.9%)	463 (69.5%)
(b) Assisting patrons in selecting books	3 (0.5%)	42 (6.3%)	621 (93.2%)
(c) Helping people find answers	4 (0.6%)	32 (4.8%)	630 (94.6%)
(d) Tours of your library	31 (4.7%)	211 (31.7%)	424 (63.7%)
(e) Preparing bibliographies for patrons	242 (36.3%)	335 (50.3%)	89 (13.4%)
(f) Giving individual instruction in library use	32 (4.8%)	252 (37.8%)	382 (57.4%)
(g) Answering telephone questions	30 (4.5%)	50 (7.5%)	586 (88.0%

SAMPLE A

The results from sample B, seen below, are a little more revealing than those from sample A, not only in relation to responses "e", "f", and "d" but also in relation to "a."

Some uncertainty is shown about "directing patrons to community resources."

20. Which of the following does your library provide?

	Never	Occasionally	Standard Service
(a) Directing patrons to community resources	10 (4.3%)	94 (40.2%)	130 (55.6%)
(b) Assisting patrons in selecting books	1 (0.4%)	26 (11.1%)	207 (88.5%)
(c) Helping people find answers	2 (0.9%)	22 (9.4%)	210 (89.7%)
(d) Tours of your library	18 (7.7%)	88 (37.6%)	128 (54.7%)
(e) Preparing bibliographies for patrons	125 (53.4%)	84 (35.9%)	25 (10.7%)
(f) Giving individual instruction in library use	21 (9.0%)	102 (43.6%)	111 (47.4%)
(g) Answering telephone questions	23 (9.8%)	33 (14.1%)	178 (76.1%

SAMPLE B

The 21st question, shown below exactly as it appeared on the questionnaire, was directed at gathering data about the number of reference questions asked on a weekly basis in the library. Tacitly, it was assumed that these questions were also answered. Testing degrees of accuracy was really not an objective of this first survey, however.

21. Do you keep a record of the number of questions asked? **Yes** _____ **No**_____ Even if you do not keep a record, give the best estimate for the following:

Type of Question		Average Number of Questions Per Week (1980) In Library	By Telephone
(a) Directional	(Questions which help in locating things in the library. EXAMPLE: "Where is the telephone directory?")	_____	_____
(b) Reference	(Questions which may include the use, knowledge, or interpretation of information sources. EXAMPLE: "What is the population of Chicago?")	_____	_____

Below are the responses from samples A and B for question 21.

Yes	No	Missing
258 (38.7%)	406 (61.0%)	2 (0.3%)
(a) Directional questions asked (weekly)	110 (42.3%)	
(b) Reference questions in library	100 (38.4%)	
(c) Reference questions by phone	50 (19.2%)	
(d) Total of questions per week	260	

SAMPLE A

Yes	No
65 (27.8%)	169 (72.2%)
(a) Directional questions asked (weekly)	61.1 (51.7%)
(b) Reference questions in library	41.3 (34.9%)
(c) Reference questions by phone	15.7 (13.3%)
(d) Total of questions per week	118.1

SAMPLE B

The results of survey question 21 must be considered somewhat "soft" because of the fact that a majority of the librarians surveyed did not really keep records of their reference questions. This in itself is quite interesting and revealing. Further, it is also of some value to have an approximate sense of the number of questions that are asked on a weekly basis. The following frequency chart provides an examination of the number of libraries in relation to the total number of reference questions asked. Sixty two percent of the libraries recorded 99 or fewer questions per week.

Total Questions Per Week	Number of Libraries	Percentages
0-9	140	22.6
10-49	140	22.6
50-99	108	16.4
100-199	112	17.0
200-299	46	7.0
300-399	34	5.2
400-499	15	2.3
500 and Up	46	7.0

Figure 4

Calculating from the number of hours the libraries are open and data from question 21, on average of 6.7 questions were asked each hour in sample A. In sample B the average would be 4.7 questions per hour. While the number of questions may seem small, the reader is again encouraged to consider the environmental restraints with which rural librarians must deal. Also, question 26 may shed some further light on this issue when it is reviewed.

The next series of survey questions, number 22 through number 27, concerned with the types of reference questions identified by the respondents as being characteristic of their libraries and techniques for answering them. Question 22 follows:

22. Do the reference questions that you receive fall into a few major types? Please identify three of these, listing them from questions more frequently asked to those less frequently asked.

(a) _____
(b) _____
(c) _____

The following data (figures 5 and 6) are meant to graphically illustrate the responses to question 22. This was made somewhat difficult by the fact that 23 different types of questions were recorded. It should not be surprising to the reader that "homework/research" is first as the largest category. One will remember from question 13 that, other than the public school library , no other library is really available to provide assistance to the rural public librarian. Once school hours are over, the only resource for students completing school assignments is the public library. This author can recall the comments of a teacher/librarian who lived in the "country" and indicated that students frequently phoned in the evening about using his personal set of encyclopedias because no other "library" was available. Figure 5 represents the "a," "b," and "c" responses for question 22 for sample A, and figure 6 does likewise for sample B. The reader should note that the next largest category of question type after "homework/research" is "ready reference." This was true for both samples.

a (N = 552)	
Homework/Research	120 (21.7%)
Ready Reference	82 (14.9%)
Literature/Biography	64 (11.6%)
General Information	46 (8.3%)
Hobbies	32 (5.8%)
Geography/History	28 (5.1%)
Medical/Health	28 (5.1%)

b (N = 476)	
Ready Reference	54 (11.3%)
General Information	51 (10.7%)
Literature/Biography	49 (10.3%)
Homework/Research	47 (9.9%)
Medical/Health	39 (7.6%)
Geography/History	25 (5.2%)
Local History	25 (5.2%)

c (N = 433)	
Ready Reference	62 (14.3%)
General Information	50 (11.5%)
Literature/Biography	37 (8.5%)
Homework/Research	36 (8.3%)
Hobbies	34 (7.8%)
Genealogy	22 (5.0%)
Technical/Scientific	21 (4. %)

Figure 5

a (N = 167)	
Homework/Research	36 (21.5%)
General Information	24 (14.4%)
Literature/Biography	20 (12.0%)
Ready Reference	14 (8.4%)
Local History	13 (7.8%)
Directional	11 (6.6%)
Geography/History	10 (6.0%)

b (N = 121)	
Ready Reference	18 (14.9%)
Homework/Research	17 (14.4%)
Local History	12 (9.9%)
Medical/Health	11 (9.1%)
Hobbies/Crafts	8 (6.6%)
Technical/Scientific	8 (6.6%)
Geography/History	8 (6.6%)

c (N = 131)	
General Information	26 (19.8%)
Hobbies/Crafts	17 (12.9%)
Ready Reference	14 (10.7%)
Literature/Biography	9 (6.8%)
Directional	9 (6.8%)
Careers	8 (6.1%)
Homework/Research	5 (3.8%)

Figure 6

Question 23, following, was related to questions that the respondents could not answer:

23. What are the most common types of questions that you cannot answer? Please list three, starting with the more frequently asked questions and working to the less frequently asked.

(a) _____
(b) _____
(c) _____

Figure 7 represents the data from sample A, and Figure 8 shows sample B data.

a (N = 544)		b (N = 363)	
Technical/Scientific	115 (25.2%)	Technical/Scientific	61 (16.8%)
General/Information	62 (13.6%)	General Information	57 (15.7%)
Medical/Health	43 (9.4%)	Medical/Health	36 (9.9%)
Business	37 (8.1%)	Legal	32 (8.8%)
Legal	36 (7.9%)	Business	31 (8.5%)
Genealogy	32 (7.0%)	Genealogy	27 (7.4%)

c (N = 277)	
Technical/Scientific	39 (14.0%)
General Information	36 (12.9%)
Medical Health	33 (11.9%)
Genealogy	26 (9.3%)
Legal	22 (7.9%)
Business	22 (7.9%)

Figure 7

a (N = 134)		b (N = 100)	
Technical Information	28 (20.8%)	General Information	20 (20.0%)
General Information	28 (20.8%)	Medical Health	17 (17.0%)
Genealogy	15 (11.1%)	Technical/Scientific	11 (11.0%)
Medical/Health	12 (8.9%)	Hobbies	11 (11.0%)
Hobbies	10 (7.4%)	Literature/Biography	7 (7.0%)
Geography/History	9 (6.7%)	Business	6 (6.0%)

c (N = 81)	
General Information	17 (20.9%)
Technical/Scientific	8 (9.8%)
Genealogy	8 (9.8%)
Legal	8 (9.8%)
Medical/Health	7 (8.6%)
Business	6 (7.4%)

Figure 8

Although the scattering of data into 18 types make the process of assimilation extremely difficult, the three largest categories of types of questions were "technical/scientific," "general information" and "medical/health." In sample B (figure 8) the "general information" type led the two other categories. Parenthetically, data resulting from questions 22 and 23 are very similar to the findings of research conducted in Pennsylvania.[7]

Because of the relative complexity of question 24, it is given below in its entirety as it appeared on the questionnaire. Also, because of the rating scale used by the respondents, the reader should likewise be alerted to the possible "softness" of these data. Very interestingly, the data generated by the respondents in the two samples, and shown below, were quite consistent. The "lack of reference materials" and "questions too technical" were perceived to be more significant to the respondents in being unable to answer questions than "lack specialized staff" or "type of questions we don't answer."

24. Indicate the reasons that your library cannot answer some information requests. Please number the following categories *from 1 (for a major difficulty) to 5 (for a minor difficulty)*; 2, 3 and 4 would represent some middle level of difficulty.

_____ (a) Questions too technical
_____ (b) They fall into a category we do not answer. (As for example, diagnosis of a medical problem).
_____ (c) Lack the needed reference materials
_____ (d) Lack of specialized reference staff
_____ (e) Other. Please indicate what the other problems are:

_____
_____
_____

Following are the results from sample A and sample B.

	1	2	3	4	5
(a) Questions too technical	214 (40.6%)	151 (28.7%)	103 (19.6%)	46 (8.7%)	12 (2.3%)
(b) Type of questions we don't answer	80 (17.3%)	51 (11.0%)	84 (18.1%)	126 (27.2%)	122 (26.3%)
(c) Lack reference material	259 (46.2%)	138 (24.6%)	93 (16.6%)	51 (9.0%)	20 (3.6%)
(d) Lack specialized staff	96 (19.2%)	78 (15.6%)	143 (28.6%)	109 (21.8%)	73 (14.6%)
(e) Other	33 (20.4%)	22 (13.6%)	28 (17.3%)	25 (15.4%)	54 (33.3%)

SAMPLE A

	1	2	3	4	5
(a) Questions too technical	70 (42.9%)	47 (28.8%)	30 (18.4%)	13 (7.9%)	3 (1.8%)
(b) Type of questions we don't answer	26 (16.0%)	11 (7.6%)	30 (20.8%)	47 (32.6%)	30 (20.8%)
(c) Lack reference material	101 (56.4%)	44 (24.5%)	21 (11.7%)	10 (5.5%)	3 (1.6%)
(d) Lack specialized staff	42 (26.9%)	24 (15.3%)	43 (27.5%)	31 (19.8%)	16 (10.2%)
(e) Other	10 (20.8%)	3 (6.2%)	10 (20.8%)	5 (10.4%)	20 (41.6%)

SAMPLE B

It's of further interest to note that item c of sample B ("lack reference material") was felt even more strongly as a priority issue, compared to sample A, as a reason for not being able to answer some information requests. The "other" category in both samples included responses such as "lack of resources," "lack of time," "lack of funds," "lack of space," "lack of trained staff," and the like.

The following question, number 25, sought to determine the avenues pursued by librarians in dealing with unanswered questions. The question is cited in its entirety.

25. How do you handle reference questions you cannot answer? Please list those methods most often used to those least often used, again using the *number 1 for the method most frequently used and number 5 for the method least frequently used*. (Again, 2, 3 and 4 should be used for the in-between levels.)

_____ (a) Direct patron to another library.
_____ (b) Direct patron to an information source other than a library. Please list the two common sources:
(1) _____
(2) _____
_____ (c) Interlibrary loan for special information materials not in your library.
_____ (d) Telephone another library and locate the information.
_____ (e) Other. Please comment: _____

Sample A responses follow directly and then the data from sample B.

	1	2	3	4	5
(a) Direct patron to another library	122 (21.9%)	124 (22.2%)	142 (25.4%)	109 (19.5%)	61 (10.9%)
(b) Information source other than a library	61 (11.7%)	103 (19.8%)	168 (32.4%)	151 (29.1%)	
(c) Interlibrary loan	442 (72.6%)	104 (17.0%)	44 (7.2%)	12 (2.0%)	35 (6.7%)
(d) Telephone another library	129 (23.8%)	136 (25.0%)	109 (20.1%)	101 (18.6%)	67 (12.4%)
(e) Other	30 (20.1%)	14 (9.4%)	13 (8.7%)	16 (10.7%)	76 (51.0%)

SAMPLE A

	1	2	3	4	5
(a) Direct patron to another library	37 (20.2%)	40 (21.8%)	58 (31.6%)	30 (16.3%)	18 (9.8%)
(b) Information source other than a library	27 (17.0%)	33 (20.8%)	46 (29.1%)	41 (25.9%)	11 (6.9%)
(c) Interlibrary loan	172 (82.2%)	29 (13.8%)	4 (1.9%)	3 (1.4%)	1 (0.4%)
(d) Telephone another library	39 (22.8%)	41 (23.9%)	32 (18.7%)	29 (16.9%)	30 (17.5%)
(e) Other	4 (8.3%)	8 (16.6%)	4 (8.3%)	6 (12.5%)	26 (54.1%)

SAMPLE B

While allowing for the possible confusion arising over the use of the rating system in answering the question, some very interesting information was generated by the respondents. Most noticeable was the central role played by "interlibrary loan" as a strategy for obtaining information. This, of course, would not be surprising approach for one who was located in a rural area with no other available resources. In relation to the use of the "telephone," the distribution of percentages among the rating categories was certainly conditioned by the fact that not all libraries have telephones (to be discussed later). Further, given the few other libraries in rural areas, who in fact would be telephoned? Certainly influencing strategy "a," in which the respondents divided their ratings among categories 1 through 5, was also the fact that other libraries are just not convenient to be utilized as referral points. Particularly interesting, however, were the responses to "information source other than a library." One will note that the highest percentages of ratings are in categories 3 and 4 in both samples, suggesting that these strategies are less strongly felt by the respondents than the remaining ones. In my view, this would parallel some of the research recently done among metropolitan public libraries, which suggests that the librarians surveyed only answer the reference question posed to them or refer clients to other sources (when they cannot answer the questions) 50 percent of the time.[8]

Response "b" of question 25 requested that the librarians surveyed indicate sources other than a library which they utilized in directing patrons for information. While the responses were tabulated without concern for whether or not they were cited first or second, they provide insight into the alternative strategies used by surveyed libraries. These data are shown in figure 9.

Other Information Resources	Sample A (N = 739)		Sample B (N = 217)
Government Agencies	188 (25.4%)	Government Agencies	42 (19.3%)
Local Agencies	131 (17.7%)	Local Agencies	39 (17.9%)
Extension Services	97 (13.1%)	Local Citizens	38 (17.5%)
Local Citizens	79 (10.7%)	Extension Services	29 (13.3%)
Historical Societies	65 (8.7%)	Other Libraries	23 (10.6%)
Chambers of Commerce	64 (8.6%)	Historical Societies	17 (7.8%)
State or National Agencies	40 (5.4%)	State or National Agencies	14 (6.4%)
Other Libraries	38 (5.1%)	Schools and Universities	10 (4.6%)
Schools and Universities	29 (3.9%)	Chambers of Commerce	5 (2.3%)
Genealogical Services	8 (1.0%)	Genealogical Services	0 (0.0%)

Figure 9

In examining figure 9, it's interesting to note the larger role (in sample B) played by "local citizens." One will, of course, remember the importance associated with interpersonal relations in rural communities as a prime means of communication. Interestingly, it's also important to mark the decreased role in sample B that was assumed by "government agencies" and "chambers of commerce," probably owing to the fact that they are available in fewer numbers when compared with sample A.

Finally, in relation to the "other" category of question 25, respondents referred to "system reference centers," "individuals in the community," and "specialized community sources" as additional alternative strategies.

Without a doubt the most staggering results of the entire survey may be seen in question 26. The results from samples A and B are shown below along with the data from question 27 because of its direct relationship to question 26. Sample A data are shown first.

26. Do you think people in your area have information needs that they do not bring to the library?

No	Perhaps	Yes	I Don't Know
154 (23.1%)	59 (8.9%)	406 (61.0%)	47 (7.1%)

27. Could your library handle the needs in number 26?

No	Perhaps	Yes	I Don't Know
241 (36.2%)	96 (14.4%)	302 (45.3%)	27 (4.1%)

SAMPLE A

26. Do you think people in your area have information needs that they do not bring to the library?

No	Perhaps	Yes	I Don't Know
71 (30.3%)	21 (9.0%)	119 (50.9%)	23 (9.8%)

27. Could your library handle the needs in number 26?

No	Perhaps	Yes	I Don't Know
97 (41.5%)	34 (14.5%)	94 (40.2%)	9 (3.8%)

SAMPLE B

Forty percent of the respondents in sample A and 50 percent of those in sample B were really unaware, in varying degrees, that there might be information needs in the community not expressed to them in the library. Further, the fact that 23 percent and 30 percent, respectively, of the respondents in sample A and sample B indicated that there definitely were no information needs should be a matter of a great concern to American librarianship and to students of libraries. Perhaps the situation can be expressed in part by comments of the respondents who stated, "How can I know if there are unexpressed needs if the individuals with information needs don't come to the library?" Presumably, the mentality of approximately 40 percent to 50 percent of the respondents excluded the importance of attempting to reach out and discover these needs. Another thought might be, however, (and this doesn't mitigate the problem) that because of the relevance of interpersonal communication in rural areas, the librarians probably assume that in knowing most of the people in the town, they in fact know all of the information needs. Added to the meaning of providing information services in rural areas must also be added the fact that many rural librarians have not even made a modestly systematic assessment of their clientele's needs. This lack is very much precipitated, of course, by the fact that a majority of rural librarians are academically untrained. The current discussions prompted by NCLIS and the American Library Association related to marketing, for example, are particularly relevant for the future of rural libraries.

Parenthetically, further illustration of the educational dysfunction facing rural librarians can be made through a phone call this author recently received from an individual who wanted to know if the CSRL could be of help to her because she had just been "appointed" public librarian in a small town in Pennsylvania. In the discussion she indicated that the reasons she had been chosen as librarian were that "she liked to read, and she lived near the library." We must all be sympathetically concerned about her future role as librarian.

Because of the depressing results from answers to question 26 (question 27 now seems to be of dubious value) a final com-

ment is appropriate. One of the graduate students enrolled in the library science course entitled, "The Public Library in Rural America," very appropriately referred to the "mentality" exhibited by the rural librarian as effectually altering library service. While this may seem an obvious matter, the circumstances analyzed in this document have attempted to portray the environment in which the rural librarian provides information services. One must also consider and weigh the significance of the rural librarian as a product of his or her environment in addition to the external circumstances always working on the librarian. A very useful question for the next survey will be one designed to determine where librarians have lived for most of their lives. If perceptions of library service are narrowly viewed by rural librarians, perhaps it shouldn't be surprising that few inquiries are asked about unseen (unknown) needs.

Question 28 was concerned with the remedies librarians thought were most purposeful to provide for the information needs given in responses to question 26.

28. If your library could not presently provide the information needs discussed in question number 26 above, what additional resources (e.g., staff, reference tools, etc.) would be required to handle these problems?

SAMPLE A (N = 576)		SAMPLE B (N = 183)	
Reference Resources	228 (39.5%)	Reference Resources	65 (39.8%)
Additional Staff	141 (24.4%)	Additional Staff	29 (17.7%)
Reference Training	56 (9.7%)	More Money	22 (13.4%)
More Money	53 (9.2%)	Reference Training	19 (11.6%)
More Time	38 (6.6%)	More Public Relations	10 (6.1%)
More Space	28 (4.8%)	More Space	8 (4.9%)
More Public Relations	26 (4.5%)	More Time	7 (4.2%)

Figure 10

To aid in the interpretation of figure 10, and for anyone adding the percentages, it should be indicated that responses of three or fewer were eliminated from the total received to this question. The primary response to question 26 seems to correlate directly with the data resulting from question 24, in which librarians were asked why they could not answer some information requests. The largest response category to that question was "lack reference materials." While it is tempting to comment on why "more money" was not given as the largest response category in figure 10, the fact that question 28 was worded as "what additional *resources*. . .would be required" probably precluded respondents from answering with the "cry" of budget.

Question 17 asked for a definition of reference services; the 20th question was concerned with the activities comprising reference services; and the present question, number 29, attempted to provide an opportunity for the respondents to describe the amount of their time spent in relation to specified reference activities.

Sample A data are presented first, followed by data in sample B.

29. Please estimate the percentage of your daily work time doing the following:

(a) Answering reference question (all types)	17.9%
(b) Selecting library materials	16.1%
(c) Cataloging library materials	13.0%
(d) Library instruction	5.2%
(e) Public relations activities	10.7%
(f) Administration	27.0%
(g) Other	10.0%

SAMPLE A (N = 444)

29. Please estimate the percentage of your daily work time doing the following:

(a) Answering reference question (all types)	14.6%
(b) Selecting library materials	16.1%
(c) Cataloging library materials	16.6%
(d) Library instruction	5.7%
(e) Public relations activities	11.6%
(f) Administration	21.9%
(g) Other	13.3%

SAMPLE B (N = 153)

Because of the fact that the total percentages reported frequently varied from 85 percent to 115 percent, it was decided that only those responses which actually were 100 percent would be counted. This decision is reflected in the number of cases analyzed above. Frankly, it should be admitted that question 29 has to be interpreted "softly." Other than the concerns, e.g., of what person completed the questionnaire and whether that person followed the directions, particularly in sample B, one has to wonder about the practical ability of being able to separate the administrative function from other library activities in the light of the few staff members (3.0) who must help with similar tasks. But setting aside the uneasiness, the percentages in question 29 are still very interesting. First, they reinforce the fact that reference service is not totally comprised of answering reference questions. This is, of course, true in all libraries. Second, it's noteworthy to mention the small percentage of time that was identified in the category "library instruction." Some disinclination toward this activity was shown in question 20 by the fact that, on the average, it was chosen as a "standard service" in only about half the cases. The third aspect of interest in relation to question 29 deals with the category "administration." Not surprisingly, in sample B the percentage is smaller—largely because of the fact that more time must be spent with the practical necessities of running the library, as illustrated with the "cataloging" category. Finally, in relation to question 29, some concern must be shown for the fact that only about 11 percent of the time is spent in what is perceived to be "public relations." One, of course, will grant the flexibility of the concept of public relations, and while one would be hard pressed to cite a suitable norm, it should be more than 11. Perhaps an "accelerated," purposeful public relations campaign would produce, among other things, more insight into the information needs of the library's constituency. The "other" category of question 29 included the following activities: "housekeeping," "circulation desk," "programs displays," and "meetings, supervision." Apparently the respondents did not include "programs, displays" as part of public relations. Question 30, which was also directed toward understanding the number of support services available to rural librarians, provided data even more depressing than question 13.

30. Are there any other information services in your community, in addition to your library and the libraries you identified in question 13?

(a) I.R. Centers	0.2
(b) "Hotlines"	0.3
(c) Other	0.2
	0.7

Sample A

(a) I.R. Centers	0.1
(b) "Hotlines"	0.2
(c) Other	0.2
	0.5

Sample B

In the "other" category, respondents listed "public service agencies," "Extension Services," "local governments," and "chambers of commerce." Finally, it may be of interest to know that 381 (37.2 percent) of the librarians sampled responded with "zero" or "no entry" for a, b, and c of question 30.

Question 31 provides the capstone in describing the rural library environment through a partial census of equipment used.

31. Do you have the following equipment?

	Yes	No	Missing
(a) Telephone	823 (93.5%)	42 (6.3%)	1 (0.2%)
(b) Typewriter	831 (94.7%)	34 (5.1%)	1 (0.2%)
(c) Photocopier	478 (71.5%)	189 (28.4%)	1 (0.2%)
(d) Teletype	28 (4.2%)	637 (95.6%)	1 (0.2%)
(e) Word Processor	16 (2.4%)	649 (97.4%)	1 (0.2%)
(f) Duplicator	162 (24.3%)	503 (75.5%)	1 (0.2%)
(g) Other	234 (35.1%)	431 (64.7%)	1 (0.2%)

SAMPLE A

31. Do you have the following equipment?

	Yes	No	Missing
(a) Telephone	202 (86.3%)	32 (13.7%)	
(b) Typewriter	209 (89.3%)	25 (10.7%)	
(c) Photocopier	101 (43.2%)	133 (56.8%)	
(d) Teletype	3 (1.3%)	230 (98.3%)	1 (0.4%)
(e) Word Processor	1 (0.4%)	232 (99.1%)	1 (0.4%)
(f) Duplicator	25 (10.7%)	208 (88.9%)	1 (0.4%)
(g) Other	53 (22.6%)	181 (77.4%)	

SAMPLE B

Yes, there are American libraries without telephones—as surprising as it may seem. Our natural inclination to consider the telephone as an extension of the library's information services becomes a bit jaded when we must consider the status of those without telephones. However, this individual heard recently of a rather unusual case in which the library, while having a telephone, had an unlisted number. And the explanation was that the librarian didn't want anyone phoning in. One would like to believe that the instances of telephoneless libraries, shown above, represent more basic issues than unlisted numbers.

While the problem of copyright may seem a more timely concern in our society at present than the simple existence of photocopying equipment, rural librarians, particularly those in populations of 2,500 or fewer people, are confronted with the more basic dilemma of not having photocopiers available.

Over 30 percent of the libraries in sample B were without the services of a photocopier. Even more alarming was the fact that 75 percent of all of the libraries surveyed had no duplicating equipment. For sample B this figure was an immense 88 percent. No wonder that public relations is impeded! Finally, in the absence of telephones and duplicating equipment it isn't at all surprising that teletype machines and word processors are virtually nonexistent. The "other" category of question 31 elicited a wide array of responses that included everything from "microfiche readers" to "adding machines."

Because of the desire to maximize the amount of information from the survey for the present and into the immediate future, the next question dealt purposefully with the matter of technology.

32. What automated services do you use?

	None	Use Directly	Indirectly	Next 5 Years
(a) OCLC	340 (51.0%)	19 (2.9%)	268 (40.2%)	39 (5.9%)
(b) Lockheed Dialog	581 (87.2%)	2 (0.3%)	64 (9.6%)	19 (2.9%)
(c) Microcomputer	544 (81.7%)	18 (2.7%)	31 (4.6%)	72 (11.0%)
(d) Other	597 (89.6%)	15 (2.3%)	28 (4.2%)	26 (3.9%)

SAMPLE A

32. What automated service do you use?

	No	Use Directly	Indirectly	Next 5 Years
(a) OCLC	144 (61.5%)	4 (1.7%)	82 (35.0%)	4 (1.7%)
(b) Lockheed Dialog	219 (93.6%)	1 (0.4%)	10 (4.3%)	4 (1.7%)
(c) Microcomputer	210 (89.7%)	3 (1.3%)	13 (5.6%)	8 (3.4%)
(d) Other	218 (93.2%)	4 (1.7%)	10 (4.3%)	2 (0.9%)

SAMPLE B

There is little question that OCLC was, on an average, an important factor in the lives of the librarians surveyed. Since our sample was national in character, no regional influence exerted itself to skew the data. There is still considerable room for system development, however, in that 90 percent (90 percent in sample B) of the librarians who responded did not participate in the OCLC network as yet—or any other, for that matter, since none other was mentioned in the "other" category of question 32.

It probably isn't surprising that access to Dialog by rural librarians was less than 10 percent within the total survey. This would only be consistent with the general lack of resources available to librarians in rural America, which has been cited throughout this document. Direct Dialog use was less than 3 percent as reported by the respondents. Parenthetically, it might be useful to mention that while some other vendor might have been utilized as a category in the survey, "Dialog" was used as a paradigm since its services are well known. Interestingly, no other vendor was identified in the "other" category by the respondents.

Other than "OCLC," none of the other categories measured as large a response. There was a hopeful sign, however, in relation to the "microcomputer" category. On a percentage basis, there were almost as many direct microcomputer uses as OCLC responses in samples A and B. And in the "next 5 years" category, the largest responses were, also registered in relation to "microcomputers" for both samples. As an aside, this individual now finds himself with floppy disks on his face for stating unequivocally about 2 years ago that small rural libraries would be untouched by computers in the near future. This was before Radio Shack came to Clarion, Pennsylvania, however.

Before leaving question 32, which dealt with automated services, it is worth noting that the 24 libraries who responded to the "other" category mentioned "information networks for profit," "state or regional networks," "cataloging and processing" and "COM catalogs," as their responses.

The next to last question, number 33, asked, "How many hours per week is your library open?" The average for sample A libraries was 38.7 hours, and for sample B it was 35 hours. A better indication of the libraries' hours can be seen in the frequency distribution of figure 11. Approximately half of the entire sample were libraries that were open 39 or fewer hours. And 27 percent of the libraries were open only 29 or fewer hours.

The final question of the survey asked librarians, "What is the biggest problem you have in providing reference service?" The comments follow in figure 12. Although some respondents gave more than one answer, no ranking was done in the tabulation.

Number of Service Hours	Number of Libraries	Percentages
1-9	22	3.3
10-19	70	10.6
20-29	87	13.2
30-39	99	15.0
40-49	132	20.0
50-59	118	17.9
60 and Up	106	15.9
Blanks	26	3.9

Figure 11

Sample A (N = 747)		Sample B (N = 244)	
Lack Materials	219 (29.3%)	Lack Materials	73 (29.9%)
Lack Staff	118 (15.7%)	Lack Time	46 (18.8%)
Lack Time	109 (14.5%)	Lack Funds	41 (16.8%)
Lack Trained Staff	88 (11.7%)	Lack Staff	24 (9.8%)
Lack Funds	87 (11.6%)	Lack Trained Staff	19 (7.7%)
Lack Space	47 (6.3%)	Lack Space	19 (7.7%)
Patron Unaware of Service	34 (4.5%)	Patrons Unaware of Service	11 (4.5%)
Reference Interview	30 (4.0%)	Reference Interview	8 (3.2%)

Figure 12

To aid in the interpretation of figure 12, the reader should know that responses of four or fewer were eliminated from the chart. Also, the "lack time" category was actually interpreted by the respondents to mean the "hours that the library was open" and the "patron's unwillingness to wait for information."

While there may be few surprises in the responses to question 34 (figure 12), particularly in the light of what already has been expressed in this document, the "staffing" category is worthy of particular mention. If "lack staff" and "lack trained staff" are considered in one category, it would amount to 27.5 percent of the total for sample A and 17.6 percent for sample B (2,500 or fewer). Overall, "lack staff" would then only be preceded by "lack materials" as the largest response category.

Finally, it is significant in two respects that the "reference interview" was one of the responses in question 34. First, it continues to be acknowledged as a problem facing those who provide reference service; and second, it placed last in terms of significance. While the rural librarian's practical world emphasizes immediate problems, the interpersonal communications between the librarians and the clients are of primary concern. And certainly the reference interviews contribute to finding out about information needs in the community, although serving immediately as an in-library activity. This is another area of needed development.

Conclusions

It was not assumed when this project was completed that it would answer all of the questions and/or circumstances either related to reference services or rural public libraries in the United States. The preliminary data given as the text of this document were intended rather to constitute only the first step in gathering information and attempting to describe some of the dynamics that confront the public librarian in rural America as he or she attempts to provide information services.

A highly justifiable question to ask of the author, therefore, is, "What has been learned?" There can be little doubt, even for the least objective-minded individual that the goal of this research was achieved. It has provided a proverbial gold mine of information. That was relatively easy since little data existed before. But the question still needs to be posed, "What new knowledge now exists as a consequence of this investigation?"

It is the author's view that the most significant results of this study may now be the ability to provide descriptive models of rural libraries in the United States. Beginning with a legally defined (by the Census Bureau) rural library, we now know that (1) On an average this library is located in a town of 1,295 people with a service area equal to almost four times that population, 4,690; (2) it is 53 miles away from a city of 25,000 or more individuals, with some library patrons traveling 12 miles for library services; (3) its annual budget is equal to $28,000, and federal funds provide only 3 percent of the total; (4) this library is open 25 hours per week, and its book collection consists of 14,400 volumes. (The only other library available in the service area is that of a public or private school where few additional resources can be found); (5) the library's staff consists of three salaried individuals, and the odds are only one out of ten of finding a librarian with a master of library science degree—25 percent of the staff consists of volunteers; (6) in terms of equipment this library probably has a telephone and typewriter but no duplicating equipment; and there is only an even chance that it has a photocopier; and (7) while four out of ten libraries are connected to the OCLC system, it is almost entirely disconnected from the services provided by Dialog or any other electronic data base vendor.

There is a close statistical relationship between the model library generated as a consequence of this total investigation and the rural library just described. (1) The model library is in a town of 6,731 people serving a population area of 23,853; (2) it is 40 miles away from a city of 25,000 individuals, and some library patrons must travel 14 miles for service; (3) its annual budget is $82,000, of which 3 percent is derived from federal sources; (4) the library is open 39 hours per week with only the public or private school library available for assistance; (5) the staff consists of three and one-half salaried persons with a one in four chance of one of those individuals being academically trained—25 percent of the staff consists of volunteers; (6) while this library has the use of a telephone, typewriter, and photocopier, it, likewise, has no duplicating

facilities; and (7) while there are two out of five chances that this library is connected to the OCLC network, there is only one out of ten chances that it is linked to an electronic data base vendor such as Lockheed Dialog.

The effort which culminates with this paper will be considered modestly successful if it not only brings attention to the environment in which public librarians attempt to provide information services to rural Americans but also encourages the development of further examinations which ultimately will bring about positive change.

References

1. Mary Lee Bundy, *et. al, Reference Service in American Public Libraries Serving Populations of 10,300 or More.* (Urbana, Illinois: University of Illinois Library School, Occasional Papers, 61, 1961.)

2. Vance W. Grant and Leo J. Eiden, *Digest of Education Statistics, 1980.* (Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, 1980), 219.

3. The reader is invited to consider the entire research that was reported in: "Information Services and the Rural Library," *Library Trends.* 28, No. 4 (April, 1980): 563-578.

4. Helen M. Eckard, *Statistics of Public Libraries, 1974 (LIBGIS I)* (Washington, D.C.: U.S. Department of Health, Education and Welfare, National Center for Education Statistics, 1978), 1.

5. *Statistics of Public Libraries,* 4.

6. This document is available from the American Library Association, Reference and Adult Services Division, Chicago, Illinois.

7. "Information Services and the Rural Library," 574.

8. Thomas Childers, "The Test of Reference," *Library Journal,* 105, No. 8 (April 15, 1980): 924-928.

Appendix A

Library Questionnaire

1. Name of Library _____

2. Address of Library _____
   Telephone Number _____

3. Name of individual completing this questionnaire _____
   Title _____

4. To what type of library system(s) does your library belong? Check all appropriate blanks:
   _____ County _____ Multi-county _____ Other (Please explain)
   _____

5. Is your library a:
   Municipal _____ County _____ Other _____ (Please explain)
   _____

6. How many miles away is the closest city of over 25,000 population? _____ miles.

7. Staff	Total	Number Who Help With Reference
Salaried, full-time	_____	_____
Salaried, part-time	_____	_____
Volunteers	_____	_____

8. Educational background of staff who help with reference.

Education	Number
High school diploma	_____
College degree	_____
Master of Library Science	_____
Other. Please explain	_____

_____

_____

9. If your library is a municipal library, what is the population of the municipality? _____ population.

10. If your library serves an area beyond the municipality, what is the population of this service area? _____ population.

11. Your library's annual budget for the fiscal year ending 1980 _____.

12. Sources of budget funds:

$

Local _____
County _____
State _____
Federal _____
Other _____ (Please explain) _____

13. In the area served by your library (without a fee), what other libraries can be found? Please give the number of each:

Junior or community college _____
Public or private school _____
Technical school (post high school) _____
College or university _____
Special library _____

14. Does your library offer the following services?

Books-By-Mail _____
Bookmobile _____

15. If your library has bookmobile service, is reference service provided?

Yes _____ No _____

(a) If "yes," please comment. _____

_____

16. What is the approximate maximum distance that a patron must travel in your service area (without a user fee) to reach your library? _____

17. How do you define the reference service that you offer? Please comment:

_____

_____

18. Do you have a written policy statement on the reference service that you offer? Yes _____ No _____

(a) If "yes," did you consult any published standards or guidelines to make up your policy on reference service?
Yes _____ No _____

(b) What documents did you use? _____

_____

19. Do you have a policy against answering any specific type(s) of questions?

Yes _____ No _____

(a) If "yes," please comment on the type(s). _____

_____

20. Which of the following does your library provide?

	Never	Occasionally	Standard Service
(a) Directing patrons to community	_____	_____	_____
(b) Assisting patrons in selecting books	_____	_____	_____
(c) Helping people find answers	_____	_____	_____
(d) Tours of your library	_____	_____	_____
(e) Preparing bibliographies for patrons	_____	_____	_____
(f) Giving individual instruction in library use	_____	_____	_____
(g) Answering telephone questions	_____	_____	_____

21. Do you keep a record of the number of questions asked? Yes _____ No _____ Even if you do not keep a record, give the best estimate for the following:

Type of Question	*Average number of questions per week (1980)* *In Library*	*By Telephone*
(a) Directional (Questions which help in locating things in the library. EXAMPLE: "Where is the telephone directory?")	_____	
(b) Reference (Questions which may include the use, knowledge or interpretation of information sources. EXAMPLE: "What is the population of Chicago?")	_____	_____

22. Do the reference questions that you receive fall into a few major types? Please identify three of these, listing them from questions more frequently asked to those less frequently asked.

(a) _____

(b) _____

(c) _____

23. What are the most common types of questions that you cannot answer? Please list three, starting with the more frequently asked questions and working to the less frequently asked.

(a) _____

(b) _____

(c) _____

24. Indicate the reasons that your library cannot answer some information requests. Please number the following categories *from 1 (for a major difficulty to 5 (for a minor difficulty)*; 2, 3, and 4 would represent some middle level or difficulty.

_____ (a) Questions too technical
_____ (b) They fall into a category we do not answer. (As, for example, diagnosis of a medical problem.)
_____ (c) Lack of needed reference materials
_____ (d) Lack of specialized reference staff
_____ (e) Other. Please indicate what the other problems are:

25. How do you handle reference questions you cannot answer? Please list those methods most often used to those least often used, again, using the *number 1 for the method most frequently used and number 5 for the methods least frequently used.* (Again, 2, 3, and 4 should be used for the in-between levels.)

_____ (a) Direct patron to another library.
_____ (b) Direct patron to an information source other than a library. Please list the two most common sources:
(1) _____
(2) _____
_____ (c) Interlibrary loan for special information materials not in your library.
_____ (d) Telephone another library and locate the information.
_____ (e) Other. Please comment: _____

26. Do you think that people in your area have information needs they do not bring to the library? Please comment giving examples.

27. Could your library handle these unspoken information needs? Please comment:

28. If your library could not presently provide the information needs discussed in question 26 above, what additional resources (e.g., staff, reference tools, etc.) would be required to handle these problems?

29. Please estimate the amount of your daily work time spent doing the following:

	% of time
(a) Answering reference questions (all types)	_____
(b) Selecting library materials	_____
(c) Cataloging library materials	_____
(d) Library instruction	_____
(e) Public relations activities	_____
(f) Administration	_____
(g) Other, please specify _____	_____

30. Are there any other information services in your community, in addition to your library and the libraries you identified in question 13? Please indicate the number below.

(a) _____ Information and referral/neighborhood information center
(b) _____ Emergency hotline
(c) _____ Other. Please describe briefly. _____

31. Do you have the following equipment?

	Yes	No
(a) Telephone	_____	_____
(b) Typewriter	_____	_____
(c) Photocopying machine	_____	_____
(d) Teletype machine	_____	_____
(e) Word processing equipment	_____	_____
(f) Duplicator (e.g. ditto machine)	_____	_____
(g) Other. _____		

32. Some small libraries have made some use of mechanization, automation, and provision of access to online information systems. Sometimes this use is indirect; for instance, automated cataloging may be done through a larger administrative unit. Please check the appropriate blanks:

	Use directly in library	Use directly through another library	Plan future use (next 5 yrs.)
(a) OCLC, Inc.	_____	_____	_____
(b) Lockheed Dialog, etc.	_____	_____	_____
(c) In-house microcomputer	_____	_____	_____

(d) Other. Please comment on any other such services: _____

_____

33. How many hours is your library open for service per week? _____

34. What is your biggest problem in providing reference service? Please comment:

_____

_____

_____

_____

APPENDIX 3

Comments of WHCLIST Members on Library Activities in their States and Trust Territories

Beverly Lynd, WHCLIST, Iowa—directs the Northeast Regional Library, which serves 80 small libraries in a 13-county area of 450,000 people. Many of these libraries had no telephone, a basic piece of technology. Beverly reported that rural residents analyzed their community organizations and their information needs and now want to improve library services. She credited Iowa's Governor's Conference and the 1979 White House Conference for increased interest in long-range planning and goal setting. A WHCLIST delegate will chair a statewide citizens meeting on library needs for the 1980's in Iowa.

Mildred King, WHCLIST, Missouri—reported that she visited Shannon County in the Ozark Mountains to start a "Friends of the Library" group in this rural county of 7,000 people with no tax-supported library. Three women had collected books and opened a reading center one afternoon each week. Mrs. Edna Staples called Mildred after reading about "Friends" activities in a local newspaper. These people knew that they needed a library.

Stanley Ransom, WHCLIST, New York—directs the Clinton-Essex-Franklin Regional Library System. He urged rural libraries to develop business and management capabilities. "Business and government agencies in rural areas will need to depend more and more on library networks for access to accurate, unbiased, up-to-date and timely information. Stanley pointed out that the political effect of these services can be appreciated since county governments are contributing funds to public libraries or library systems in rural areas. Given the problems of county governments with the "new federalism," these services could ensure continued support for library systems in rural communities. Loan of microcomputers for invoicing, graphics, ledgers, and similar uses to the growing number of small businesses or to rural residents has been successful. Students at the state university at Plattsburgh volunteered to teach mini courses in computer programing.

Pat Woodrum, WHCLIST, Oklahoma—reported that Health Information and Referral Services, initiated by Library Services and Construction Act funds (LSCA) have now over 7,500 calls each month. Barbara Winder, a WHCLIST lay delegate, is the new president of the statewide "Friends" association (FOLIO).

Lenore Bright, WHCLIST, Colorado—noted that people moving to Pagosa Springs are joining WHCLIST members, trustees, and "Friends of Libraries" groups to improve radio, television, library, and other information and communications services in this isolated intersection of four state borders. Lenore is eternally grateful for a librarian's services in helping her get information on her son's medical problem through a medical data bank. This led her to a physician who was able to solve the problem.

Joanne Hart, WHCLIST, Minnesota—lives upstream on the Pidgeon River near the Canadian-American border. She drives her children 12 miles to the nearest school bus pickup stop. The library is Joanne's lifeline to the outside world. She paddles a canoe to a library on the Canadian border. At the 1979 White House Conference Joanne asked, "What's a TWX?"

Alice Cahill, WHCLIST, Massachusetts—sent reports on LSCA-funded projects in small community libraries in Massachusetts. The towns of Heath (482 persons) and Worthington (932 persons) focused on services to children and young adults by enlisting local volunteer painters and carpenters to create attractive new areas for young people. Word-of-mouth support and newspaper solicitations provided up-to-date multimedia materials of interest to young patrons. Nonfiction circulation has doubled. Young people say the library is the coolest place in town in summer.

Paul Malecki, Friends, New York—directs the Southern Tier Library System. A "Friends" group donated dictionaries and library materials for use in the county jails. Literacy volunteers established a tutor program and a reading center at Camp Monterery, a work camp for youthful offenders. Community residents in this isolated and heavily wooded area are able to use the reading center 2 days each week. This is their library, too.

Katy Perry, WHCLIST, Maine—reported that the last crank telephone in America was replaced this month in Bryant Pond—but not without great opposition. *Rural residents do not like to have change come from the outside.* These telephone operators were for decades a library of information for residents of this small town. Katy reported that Swedish, Jewish, and other groups in Aroostook County, which has a large Slavophile population, want to preserve their cultural heritage and the record of their contributions to Maine's progress. They turn to libraries to preserve the record.

Jack Mulkey, WHCLIST, Mississippi—described library programs in rural areas. Many of these were made possible through matching grants from the National Endowment for the Humanities. Yazoo City Public Library brought the elderly and young children together to read to each other and to help each other. The South Mississippi Regional Library offered programs on the significance of plant life as a curb against air, noise, and visual pollution and as an asset in recycling waste and maintaining self-sufficiency. Studies of Black geneology, illiteracy, Indian cultures and early history took place in Cohama County. The Center for the Study of Women held workshops on women in the South and women in the 1990's. An insightful comment came from one of these

workshops: "Before confronting the computer, you must know yourself and your community." Sunflower County, the birthplace of NEW YORK TIMES food editor Craig Claiborne, uses a port-o-pak library with a greenhouse for energy conservation to serve the small community of Sunflower.

Barbara Cooper, WHCLIST, Florida—is vice president of the American Library Trustee Association (ALTA) of the American Library Association. Barbara sent ALTA publication number 3, *Library Services to Farmers*, published in late 1981. The article has excellent information on developing a farm collection, cooperating with other agencies, funding, lobbying, and developing public awareness. Copies may be obtained through your library.

Catherine Lewis, WHCLIST, South Carolina—reported on a Horry County community coordinator who has responsibility for those who cannot visit the main library or its branches. She visits and conducts programs in nursing and retirement homes, child care centers, low-income housing developments, sheltered workshops, and developmental centers. Recently the community coordinator put an elderly homebound couple (the wife is bedridden) in touch with homemaker services, "Meals on Wheels" and other human services.

Magdalena Taitano, WHCLIST, Guam—reported that the governor assigned the territorial librarian the task of coordinating a centralized data bank of materials to facilitate interlibrary loan and interisland sharing of library materials. Lost book funds will be returned to libraries for materials, lectures, and films.

Carmencita Leon, WHCLIST, Puerto Rico—requested that WHCLIST emphasize resolutions for removing barriers to international cooperation and appoint a Spanish-speaking liaison as means of improving information/communication services to rural and noncontiguous areas.

NOTE: Comments from others are on file with WHCLIST.

APPENDIX 4

Public Law 91-345
91st Congress, S. 1519
July 20, 1970
As Amended By Public Law 93-29, Section 802, May 3, 1973
An Act

To Establish A National Commission On Libraries And Information Science, And For Other Purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "National Commission on Libraries and Information Science Act."

National Commission on Libraries and Information Science Act.

Statement of Policy

Sec. 2. The Congress hereby affirms that library and information services adequate to meet the needs of the people of the United States are essential to achieve national goals and to utilize most effectively the Nation's educational resources and that the Federal Government will cooperate with State and local governments and public and private agencies in assuring optimum provision of such services.

Commission Established

Sec. 3. (a) There is hereby established as an independent agency within the executive branch, a National Commission on Libraries and Information Science (hereinafter referred to as the "Commission").

(b) The Department of Health, Education, and Welfare shall provide the Commission with necessary administrative services including those related to budgeting, accounting, financial reporting, personnel, and procurement) for which payment shall be made in advance, or by reimbursement, from funds of the Commission and such amounts as may be agreed upon by the Commission and the Secretary of Health, Education, and Welfare.

84 STAT. 440

84 STAT. 441

Contributions

Sec. 4. The Commission shall have authority to accept in the name of the United States grants, gifts, or bequests of money for immediate disbursement in furtherance of the functions of the Commission. Such grants, gifts, or bequests, after acceptance by the Commission, shall be paid by the donor or his representative to the Treasurer of the United States whose receipts shall be their acquittance. The Treasurer of the United States shall enter them in a special account to the credit of the Commission for the purposes in each case specified.

Functions

Sec. 5. (a) The Commission shall have the primary responsibility for developing or recommending overall plans for, and advising the appropriate governments and agencies on, the policy set forth in section 2. In carrying out that responsibility, the Commission shall—

Advice to President and Congress.

(1) Advise the President and the Congress on the implementation of national policy by such statements, presentations, and reports as it deems appropriate;

Studies, surveys, etc.

(2) conduct studies, surveys, and analyses of the library and informational needs of the Nation, including the special library and informational needs of rural areas, of economically, socially, or culturally deprived persons, and of elderly persons, and the means by which these needs may be met through information centers, through the libraries of elementary and secondary schools and institutions of higher education, and through public, research, special, and other types of libraries;

(3) appraise the adequacies and deficiencies of current library and information resources and services and evaluate the effectiveness of current library and information science programs;

(4) develop overall plans for meeting national library and informational needs and for the coordination of activities at the Federal, State, and local levels, taking into consideration all of the library and informational resources of the Nation to meet those needs;

(5) be authorized to advice Federal, State, local, and private agencies regarding library and information sciences;

(6) promote research and development activities which will extend and improve the Nation's library and information-handling capability as essential links in the national communications networks;

Report to President and Congress.

(7) submit to the president and the Congress (not later than January 31 of each year) a report on its activities during the preceding fiscal year; and

(8) make and publish such additional reports as it deems to be necessary, including, but not limited to, reports of consultants, transcripts of testimony, summary reports, and reports of other Commission findings, studies, and recommendations.

Contract authority

(b) The Commission is authorized to contract with Federal agencies and other public and private agencies to carry out any of its functions under subsection (a) and to publish and disseminate such reports, findings, studies, and records as it deems appropriate.

(c) The Commission is further authorized to conduct such hearings at such times and places as it deems appropriate for carrying out the purposes of this Act.

Hearings.

(d) The heads of all Federal agencies are, to the extent not prohibited by laws, directed to cooperate with the Commission in carrying out the purposes of this Act.

84 STAT. 441
84 STAT. 442

Membership

Sec. 6. (a) The Commission shall be composed of the Librarian of Congress and fourteen members appointed by the President, by and with the advice and consent of the Senate. Five members of the Commission shall be professional librarians or information specialists, and the remainder shall be persons having special competence or interest in the needs of our society for library and information services, at least one of whom shall be knowledgeable with respect to the technological aspects of library and information services and sciences, and at least one other of whom shall be knowledgeable with respect to the library and information service and science needs of the elderly. One of the members of the Commission shall be designated by the President as Chairman of the Commission. The terms of office of the appointive members of the Commission shall be five years, except that (1) the terms of office of the members first appointed shall commence on the date of enactment of this Act and shall expire two at the end of one year, three at the end of two years, three at the end of three years, three at the end of four years, and three at the end of five years, as designated by the President at the time of appointment, and (2) a member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed only for the remainder of such term.

Appointments by President.

Terms of Office.

(b) Members of the Commission who are not in the regular full-time employ of the United States shall, while attending meetings or conferences of the Commission or otherwise engaged in the business of the Commission, be entitled to receive compensation at a rate fixed by the Chairman, but not exceeding the rate specified at the time of such service for grade GS-18 in section 5332 of title, United States Code, including traveltime, and while so serving on the business of the Commission away from their home or regular places of business, they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons employed intermittently in the Government service.

Compensation, travel expenses.

84 STAT. 442
35 F.R. 6247.

83 Stat. 190.

(c) (1) The Commission is authorized to appoint, without regard to the provisions of title 5, United States Code, covering appointments in the competitive service, such professional and technical personnel as may be necessary to enable it to carry out its function under this Act.

Professional and technical personnel, appointment. 80 Stat. 378.

(2) The Commission may procure, without regard to the civil service or classification laws, temporary and intermittent services of such personnel as is necessary to the extent authorized by section 3109 of title 5, United States Code, but at rates not to exceed the rate specified at the time of such service for grade GS-18 in section 5332 of title 5, United States Code, including traveltime, and while so serving on the business of the Commission away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons employed intermittently in the Government service.

Authorization of Appropriations

Sec. 7. There are hereby authorized to be appropriated $500,000 for the fiscal year ending June 30, 1970, and $750,000 for the fiscal year ending June 30, 1971, and for each succeeding year, for the purpose of carrying out the provisions of this Act.

Approved July 20, 1970.

Legislative History:

HOUSE REPORTS: No. 91-240 accompanying H.R. 10666 (Comm. on Education and Labor) and No. 91-1226 (Comm. of Conference).

SENATE REPORT: No. 91-196 (Comm. on Labor and Public Welfare).

CONGRESSIONAL RECORD:

Vol. 115 (1969): May 23, considered and passed Senate.

Vol. 116 (1970): April 20, considered and passed House, amended, in lieu of H.R. 10666.
June 29, House agreed to conference report.
July 6, Senate agreed to conference report.

APPENDIX 5

Public Law [illegible] 98—Dec. 22, 1981

Rural Development And Small Farm Research and Extension

Sec. 1444. (a) Title V of the Rural Development Act of 1972 (7 U.S.C. 2661 et seq.) is amended by striking out sections 501 through 508 and inserting in lieu thereof the following:

"Sec. 501. PURPOSES AND GOALS.—(a) The overall purpose of this title is to foster a balanced national development that provides opportunities for increased numbers of the people of the United States to work and enjoy a high quality of life dispersed throughout our Nation by providing the essential knowledge necessary for successful programs of rural development. It is further the purpose of this title to— 7 USC 2661.

"(1) provide multistate regional agencies, States, counties, cities, multicounty planning and development districts, businesses, industries, Indian tribes on Federal and State reservations or other federally recognized Indian tribal groups and others involved with public services and investments in rural areas or that provide or may provide employment in these areas the best available scientific, technical, economic, organizational, environmental, and management information and knowledge useful to them, and to assist and encourage them in the interpretation and application of this information to practical problems and needs in rural development;

"(2) provide research and investigations in all fields that have as their purpose the development of useful knowledge and information to assist those planning, carrying out, managing, or investing in facilities, services, businesses, or other enterprises, public and private, that may contribute to rural development;

"(3) increase the capabilities of, and encourage colleges and universities to perform the vital public service roles of research and the transfer and practical application of knowledge in support of rural development;

"(4) expand small farm research and extend training and technical assistance to small farm families in assessing their needs and opportunities and in using the best available knowledge on sound economic approaches to small farm operations and on existing services offered by the Department of Agriculture and other public and private agencies and organizations to improve their income and to gain access to essential facilities and services; and

"(5) support activities to supplement and extend programs that address special research and education needs in States experiencing rapid social and economic adjustments or unique problems caused by rural isolation and that address national and regional rural development policies, strategies, issues, and programs.

"(b) the goals of this title are to—

"(1) encourage and support rural United States, in order to help make it a better place to live, work, and enjoy life;

"(2) increase income and improve employment for persons in rural areas, including the owners or operators of small farms, small businesses, and rural youth;

"(3) improve the quality and availability of essential community services and facilities in rural areas;

"(4) improve the quantity and quality of rural housing;

"(5) improve the rural management of natural resources so that the growth and development of rural communities needed to support the family farm may be accomodated with minimum effect on the natural environment and the agricultural land base;

"(6) improve the data base for rural development decision-making at local, State, and national levels; and

"(7) improve the problem solving and development capacities and effectiveness of rural governments, officials, institutions, communities, community leaders, and citizen groups in—

"(A) improving access to Federal programs;

"(B) improving targeting and delivery of technical assistance;

"(C) improving coordination among Federal agencies, other levels of government, and institutions and private organizations in rural areas; and

"(D) developing and disseminating better information about rural conditions.

"Sec. 502 PROGRAMS AUTHORIZED—The Secretary of Agriculture may conduct, in cooperation and coordination with colleges and universities, the following programs to carry out the purposes and achieve the goals of this title. 7 USC 2662

"(a) RURAL DEVELOPMENT EXTENSION PROGRAMS.—Rural development extension programs shall consist of the collection, interpretation, and dissemination of useful information and knowledge from research and other sources to units of multistate regional agencies, State, county, municipal, and other units of government multicounty planning and development districts, organizations of citizens contributing to community and rural development, business, Indian tribes on Federal and State reservations or other federally recognized Indian tribal groups, and industries that employ or may employ people in rural areas. These programs also shall in-

clude technical services and educational activities, including instruction for persons not enrolled as students in colleges or universities, to facilitate and encourage the use and practical application of this information. These programs may also include feasibility studies and planning assistance.

"(b) RURAL DEVELOPMENT RESEARCH.—Rural development research shall consist of research investigations and basic feasibility studies in any field or discipline that may develop principles, facts, scientific and technical knowledge, new technology, and other information that may be useful to agencies of Federal, State, and local government, industries in rural areas, Indian tribes on Federal and State reservations or other federally recognized Indian tribal groups, and other organizations involved in community and rural development programs and activities in planning and carrying out such programs and activities or otherwise be practical and useful in achieving the purposes and goals of this title.

"(c) SMALL FARM RESEARCH PROGRAMS.—Small farm research programs shall consist of programs of research to develop new approaches for initiating and upgrading small farm operations through management techniques, agricultural production techniques, farm machinery technology, new products, new marketing techniques, and small farm finance; to develop new enterprises that can use labor, skills, or natural resources available to the small farm family; or that will help to increase the quality and availability of services and facilities needed by the small farm family.

"(d) SMALL FARM EXTENSION PROGRAMS.—Small farm extension programs shall consist of extension programs to improve small farm operations, including management techniques, agricultural production techniques, farm machinery technology, marketing techniques and small farm finance; to increase use by small farm families of existing services offered by the Department of Agriculture and other public and private agencies and organizations; to assist small farm families in establishing and operating cooperatives for the purpose of improving their family income from farming or other economic activities; to increase the quality and availability of service and facilities needed by small farm families; and to develop new enterprises that can use labor, skills, or natural resources available to the small farm family.

"(e) SPECIAL GRANTS PROGRAMS.—Special grants programs shall consist of extension and research programs to strengthen research and education on national and regional issues in rural development, including the assessment of alternative policies and strategies for rural development and balanced growth, to develop alternative strategies for national and regional investment, and the creation of employment, in rural areas; to develop alternative energy policies to meet rural development needs; and to strengthen rural development programs of agencies of the Department of Agriculture and those in other Federal departments and agencies.

"Sec. 503. APPROPRIATION AND ALLOCATION OF FUNDS.—(a) There are authorized to be appropriated such sums as are necessary to carry out the purposes of this title. 7 USC 2663

"(b) such sums as are appropriated to carry out the provisions of sections 502(a) and 502(b) of this title shall be distributed by the Secretary of Agriculture as follows:

"(1) 4 per centum shall be retained by the Secretary for program administration and national coordination of State programs, and program assistance to the States;

"(2) 10 per centum shall be used to finance work serving two or more States in which colleges or universities in two or more States cooperate or that is conducted by one college or university to serve two or more States;

"(3) 20 per centum shall be allocated equally among the States; and

"(4) 66 per centum shall be allocated to each State as follows: One-half in an amount that bears the same ratio to the total amount to be allotted as the rural population of the State bears to the total rural population of all the States, as determined by the last preceding decennial census current at that time; and one-half in an amount that bears the same ratio to the total amount to be allotted as the farm population of the State bears to the total farm population of all the States, as determined by the last preceding decennial census current at that time:

Provided, That, beginning with the fiscal year ending September 30, 1982, no State may receive more than $75,000 until all States have been allotted a minimum of $75,000.

"(c) Such sums as are appropriated to carry out the provisions of section 502(e) of this shall be distributed by the Secretary to colleges and universities, on a competitive or matching fund basis, according to the Secretary's determination of the projects and manner of funding that show the most promise of fulfilling the objectives of section 502(e) of this title.

"(d) Funds appropriated under this title may be use to pay salaries and other expenses of personnel employed to carry out the functions authorized by this title; to obtain necessary supplies, equipment, and services; and to rent, repair, and maintain facilities needed, but not to purchase or construct buildings.

"(e) Payment of funds to any State for programs authorized under sections 502(a), 502(b), 502(c), and 502(d) of this title shall be contingent upon approval by the Secretary of a plan of work and budget for such programs and compliance with such regulations as the Secretary may issue under this title. Plans for work shall be jointly developed in each State by the

land-grant colleges and universities eligible to receive funds under the Act of July 2, 1862 (7 U.S.C. 301 et seq.), and the Act of August 30, 1890 (7 U.S.C. 321 et seq.), including Tuskegee Institute. In States in which there is no land-grant institution eligible to receive funds under the Act of August 30, 1890, the land-grant institution eligible to receive funds under the Act of July 2, 1862, shall be responsible for developing plans of work and budgets. In the development of the plans of work and budgets, consideration shall be given to involvement of the resources and expertise of the colleges and universities serving the region in which the plans and budgets are to be applied.

"(f) Funds shall be available for use by each State in the fiscal year for which appropriated and the next fiscal year following the fiscal year for which appropriated. Funds shall be budgeted and accounted for on such forms and at such times as the Secretary shall prescribe.

"(g) Funds provided to each State under this title may be used to finance programs through or at private and publicly supported colleges and universities other than the institutions responsible for administering the programs, as provided under section 504 of this title.

"Sec. 504. COOPERATING COLLEGES AND UNIVERSITIES.—(a) To ensure national coordination with other federally supported agricultural research and extension programs, administration of each State program shall be the responsibility of the colleges and universities eligible to receive funds under the Act of July 2, 1862, and the Act of August 30, 1890, including Tuskegee Institute. In States that contain more than one such institution, such administration shall be the responsibility of the institution designated by mutual agreement of all such institutions, subject to approval by the Secretary of Agriculture. The Secretary shall pay funds available to each State to such institution or university. Such administration shall be coordinated with other federally supported agricultural research and extension programs conducted in the State. 7 USC 3664.

"(b) All private and publicly supported colleges and universities in a State shall be eligible to participate in programs authorized under this title. Officials at universities or colleges other than those responsible for administering the programs that wish to participate in these programs shall submit program proposals to the college or university officials responsible for administering the programs who shall consider such proposals in the process of developing the budgets and plans of work.

"(c) The institution of each State responsible for administering the programs authorized under this title shall designate an official who shall be responsible for the overall coordination of the programs.

"(d) The institution in each State responsible for administering the programs authorized under this title shall name an advisory council to review and approve budgets and plans of work conducted under this title and to advise the chief administrative officer of the institution administering the programs on matters pertaining to the programs. An existing State rural development committee or council may be named to perform this function, or a new council may be appointed by the chief administrative officer or officers. The committee or council named or appointed shall consist of at least twelve members and shall include persons representing farmers, business, labor, banking, local government, multicounty planning and development districts, public and private colleges and universities in the State, and Federal and State agencies involved in rural development.

"SEC. 505. WITHHOLDING FUNDS.—If the Secretary of Agriculture determines that a State is not eligible to receive part or all of the funds to which it is otherwise entitled for programs under sections 502(a) and 502(b) of this title because of a failure to comply with regulations issued by the Secretary under this title, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the expiration of the Congress next succeeding the session of the legislature of the State from which funds have been withheld in order that the State may, if it should so desire, appeal to Congress from the determination of the Secretary. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury. If any portion of the moneys that are received by the designated officers of any State for the support and maintenance of programs authorized under this title shall by any action or contingency be diminished or lost, or be misapplied, it shall be replaced by the State. 7 USC 2665

"SEC. 506. DEFINITIONS.—For the purposes of this title— 7 USC 2666.

"(a) 'rural development' means the planning, financing, and development of facilities and services in rural areas that contribute to making those areas desirable places in which to live and make private and business investments; the planning, development, and expansion of business and industry in rural areas to provide increased employment and income; the planning, development, conservation, and use of land, water, and other natural resources of rural areas to maintain or improve the quality of the environment for people and business in rural areas; and the building or improvement of institutional, organizational, and leadership capacities of rural citizens and leaders to define and resolve their own community problems;

"(b) 'State' means the several States, the Commonwealth of Puerto Rico, Guam, American Samoa, the Virgin Islands of the United States, and the Commonwealth of the Northern Mariana Islands; and

"(c) 'small farm' means any farm (1) producing family net income from all sources (farm and nonfarm) below the median nonmetropolitan income of the State; (2) operated by a family dependent on farming for a significant though not necessarily a majority of its income; and (3) on which family members provide most of the labor and management.

"SEC. 507.REGULATIONS.—The Secretary of Agriculture may issue such regulations as the Secretary determines necessary to carry out the provisions of this title.". 7 USC 2667.

(b) Section 509 of the Rural Development Act of 1972 (7 U.S.C. 2669) is redesignated as section 508, and section 510 of the Rural Development Act of 1972 (7 U.S.C. 2670) is repealed. Repeal

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